

SHOULD THE UNITED STATES ARMY ADAPT NEW CONDITIONS IN ITS HIV  
POLICY TO ALLOW ELIGIBLE HIV-POSITIVE SOLDIERS THE ABILITY TO  
SERVE OVERSEAS?

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE  
General Studies

by

NATHAN A. CARY, MAJOR, U.S. ARMY  
B.A., University of Arizona, Tucson, Arizona, 2007

Fort Leavenworth, Kansas  
2017

Approved for public release; distribution is unlimited. Fair use determination or copyright permission has been obtained for the inclusion of pictures, maps, graphics, and any other works incorporated into this manuscript. A work of the United States Government is not subject to copyright, however further publication or sale of copyrighted images is not permissible.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 09-06-2017		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) AUG 2016 – JUNE 2017	
4. TITLE AND SUBTITLE  Should the United States Army Adapt New Conditions in its HIV Policy to Allow Eligible HIV-Positive Soldiers the Ability to Serve Overseas?				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)  Nathan A. Cary, Major				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301				8. PERFORMING ORG REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT  Medical advancements in Human Immunodeficiency Virus (HIV) have significantly changed since the 1980s. Given these changes, the U.S. Army is now starting to see second and third order effects shape the current status and future of the organization. These trends and changes include identifying those who are most at risk, higher retention rates and dramatic policy changes. It is critical that leaders understand these changes to make sound decisions that will have a lasting impact on the future of the U.S. Army and its Soldiers.					
15. SUBJECT TERMS Human Immunodeficiency Virus, HIV, Army					
16. SECURITY CLASSIFICATION OF: UNCLASSIFIED (U)			17. LIMITATION OF ABSTRACT  (U)	18. NUMBER OF PAGES  89	19a. NAME OF RESPONSIBLE PERSON
a. REPORT (U)	b. ABSTRACT (U)	c. THIS PAGE (U)			19b. PHONE NUMBER (include area code)

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: MAJ Nathan A. Cary

Thesis Title: Should the United States Army Adapt New Conditions in its HIV Policy  
to Allow Eligible HIV-Positive Soldiers the Ability to Serve Overseas?

Approved by:

\_\_\_\_\_, Thesis Committee Chair  
Jack D. Kem, Ph.D.

\_\_\_\_\_, Member  
Bobby J. Murray, M.A.

\_\_\_\_\_, Member  
Brian C. Leakey, M.A.

Accepted this 9th day of June 2017 by:

\_\_\_\_\_, Director, Graduate Degree Programs  
Prisco R. Hernandez, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

## ABSTRACT

SHOULD THE UNITED STATES ARMY ADAPT NEW CONDITIONS IN ITS HIV POLICY TO ALLOW ELIGIBLE HIV-POSITIVE SOLDIERS THE ABILITY TO SERVE OVERSEAS?, by Major Nathan A. Cary, 89 pages.

Medical advancements in Human Immunodeficiency Virus (HIV) have significantly changed since the 1980s. Given these changes, the U.S. Army is now starting to see second and third order effects shape the current status and future of the organization. These trends and changes include identifying those who are most at risk, higher retention rates and dramatic policy changes. It is critical that leaders understand these changes to make sound decisions that will have a lasting impact on the future of the U.S. Army and its Soldiers.

## ACKNOWLEDGMENTS

I would like to start my acknowledgments with Dr. Jack Kem. Thank you for taking time out of your busy schedule of chairing sixteen MMAS theses this year and accepting one more. Your early morning reviews made this thesis possible.

Mr. Brian Leakey, thank you for your passion as a Staff Group Advisor and a committee member. You always took the time to discuss my countless questions while enlightening me to different critical creative perspectives. Your candor and truth have helped me improve as a military professional.

Ms. Bobbie Murray, thank you for your compassion and willingness to join my committee so late in the game. Your guidance and mentorship ensured my thesis topic was done with the utmost validity and ethical standards.

The United States Army Medical Command, thank you for your participation in my thesis when others chose not to participate. Your participation was vital in the success of this thesis. I also greatly appreciate the assistance I received from the Fort Leavenworth Munson Army Health Clinic in providing a medical protocol and for reviewing my thesis for medical accuracy to ensure validity and accuracy.

Thank you to Major General Scott Spellmon for being a strong role model of always doing what is right and constantly striving to seek high standards.

Finally, I would like to thank the love of my life, my wife, Jennifer. You have always believed in me and enabled me to dedicate my life to serving our country and fellow Service Members through the U.S. Army. Thank you for being a phenomenal mother of our two children and an amazing wife. You truly have the most difficult job between us and I am very lucky to have you in my life.

## TABLE OF CONTENTS

	Page
MASTER OF MILITARY ART AND SCIENCE THESIS APPROVAL PAGE .....	iii
ABSTRACT.....	iv
ACKNOWLEDGMENTS .....	v
TABLE OF CONTENTS.....	vi
ACRONYMS.....	viii
TABLES .....	x
CHAPTER 1 INTRODUCTION .....	1
Overview.....	1
Background.....	3
Primary Research Question .....	7
Secondary Research Questions.....	7
Assumptions.....	8
Definitions and Terms .....	9
Limitations and Delimitations .....	13
Chapter Summary .....	15
CHAPTER 2 LITERATURE REVIEW .....	16
Chapter Introduction .....	16
History of HIV in the U.S. Military.....	16
Legal Authority.....	17
How the United States Army is Fighting HIV.....	18
Chapter Summary .....	25
CHAPTER 3 METHODOLOGY .....	27
Chapter Introduction .....	27
Research Design .....	27
Evaluation Criteria.....	30
Threats to Validity .....	32
Chapter Summary .....	33
CHAPTER 4 DATA PRESENTATION AND ANALYSIS .....	34
Chapter Introduction .....	34

Step One: Summary of Literature Review.....	35
Step Two: Legal and Ethical Considerations.....	36
Step Three: Efficiency of Costs and Resources.....	41
Step Four: Effectiveness in Contributing to the Overall U.S. Army Mission .....	45
Step Five: Aggregation of Data .....	49
Chapter Summary .....	53
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS.....	54
Chapter Introduction .....	54
Conclusions.....	54
Recommendations for Decision Makers.....	57
Recommendations for Future Research.....	59
Parting Thoughts.....	61
APPENDIX A POSSIBLE EXPOSURE STANDARD PROCEDURES.....	62
APPENDIX B NOTIFICATION PROCESS .....	64
APPENDIX C COMMANDERS' COUNSELING.....	69
APPENDIX D STRUCTURED INTERVIEW WITH A MEDCOM HIV SUBJECT MATTER EXPERT .....	72
REFERENCE LIST .....	74

## ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
AR	Army Regulation
ART	Antiretroviral Therapy
ARV	Antiretroviral
BAMC	Brooke Army Medical Center
CDC	Centers for Disease Control and Prevention
DA	Department of the Army
DoD	Department of Defense
DoDI	Department of Defense Instruction
DR	Division of Retrovirology
EFMP	Exceptional Family Member Program
HAART	Highly Active Antiretroviral Therapy
HBV	Hepatitis B Virus
HCB	Health Care Beneficiary
HIPAA	Health Insurance Portability and Accountability Act
HIV	Human Immunodeficiency Virus
HRC	Human Resources Command
IDES	Integrated Disability Evaluation System
IRIS	Immune Reconstitution Inflammatory Syndrome
MEB	Medical Evaluation Board
MEDCOM	United States Army Medical Command
MEDPROS	Medical Protection System
MOS	Military Occupational Specialty



MSM	Male-to-Male sexual contact
NCI	Neurocognitive Impairment
NIAID	National Institute of Allergy and Infectious Disease
NIH	National Institutes of Health
OCONUS	Outside the Continental United States
PCS	Permanent Change of Station
PEB	Physical Evaluation Board
PEP	Post-Exposure Prophylaxis
PHN	Public Health Nurse
PrEP	Pre-Exposure Prophylaxis
PULHES	Physical, Upper, Lower, Hearing, Eyes, Psychiatric
SAMMC	San Antonio Military Medical Center
SOFA	Status of Forces Agreement
SOP	Standing Operating Procedure
STD	Sexually Transmitted Disease
TDY	Temporary Duty
UCMJ	Uniform Code of Military Justice
U.S.	United States
USMHRP	United States Military HIV Research Program
USPSTF	United States Preventive Services Task Force
VA	Veterans Affairs

## TABLES

	Page
Table 1. Evaluation Criteria .....	32
Table 2. Evaluation Criteria: Legal and Ethical Considerations .....	41
Table 3. Evaluation Criteria: Efficiency of Costs and Resources .....	45
Table 4. Evaluation Criteria: Effectiveness in Contributing to the Overall U.S. Army Mission .....	48
Table 5. Evaluation Criteria: Aggregation .....	51

# CHAPTER 1

## INTRODUCTION

### Overview

Medical advancements in Human Immunodeficiency Virus (HIV) have significantly changed since the 1980s. Given these changes, the U.S. Army is now starting to see second and third order effects shape the current status and future of the organization. These trends and changes include identifying those who are most at risk, higher retention rates and dramatic policy changes. It is critical that leaders understand these changes to make sound decisions that will have a lasting impact on the future of the U.S. Army and its Soldiers.

To understand these changes and trends, a review of the most up-to-date HIV contraction data is necessary. The most recent 2016 medical surveillance report states that from January 2015 to June 2016 there were 120 Soldiers who tested positive for HIV, of which 117 were male (Armed Forces Health Surveillance Branch 2016, 4). The last publicly published study specifically researching social trends of HIV contraction rates in the U.S. Army was published in 2014 and the findings were very similar to the Centers for Disease Control and Prevention's (CDC) current reporting for the population of the United States (MHRP 2015; MEDCOM 2017; CDC 2016a). The populations more at risk include males, minority groups and the male-to-male sexual contact (MSM) community (MHRP 2015; MEDCOM 2017; CDC 2016a; Armed Forces Health Surveillance Branch 2016, 4-8). Identifying the most at risk populations within our formations is crucial in aiding prevention (MHRP 2015). News articles have made claims that an increase of contraction rates are from engaging in risky behaviors to include

unprotected sex with anonymous people facilitated by social media and the use of dirty needles during drug abuse (Adams 2016; Francis 2016). These claims have yet to be verified as Army-wide trends through official research, but that does not negate the possibility that these social behaviors are contributing to HIV contractions. To counter the contraction and transmission of HIV, medical professionals are relying on education and treatment (DA 2014a 39-40; Francis 2016). These efforts are the cornerstone to preventing and containing HIV, especially in the military.

Thirty-five years ago, HIV was discovered and within the last decade medical professionals have made significant progress in controlling the virus in infected individuals through Antiretroviral Therapy (ART) (CDC 2016g). Dramatic medical advancements in treating HIV have lengthened the lifespan of HIV patients to a “normal life expectancy”, which in turn has provided options to the HIV community within the U.S. military (DoD 2014, 9; CDC 2016g). Medical professionals are using modern HIV treatment medication to manage the virus once someone is diagnosed. Dr. Will Cooke of Foundations Family Medicine said, “The single best way to prevent the spread of HIV and Hepatitis C is to treat the disease. That's what we are doing. All additional strategies are great but mean nothing without treatment” (Francis 2016). This treatment has significantly reduced transmission rates and reshaped the future of those who are HIV-positive to live full lifespans (DoD 2014, 9; Burke 2013). It has also allowed HIV-positive Soldiers to maintain a fit for duty status and continue their military service (DoD 2014, 9).

Overall, HIV contraction rates in the U.S. Army remain consistent, but a U.S. Army medical surveillance report found a significant increase of HIV-positive Soldiers

staying in the U.S. Army. The report noted a 57 percent retention rate with a total of 291 HIV-positive Soldiers actively serving in the U.S. Army from 2011 to 2016 (Armed Forces Health Surveillance Branch 2016, 5; Defense Health Agency 2017). With more and more HIV-positive Soldiers electing to continue their service, it raises some important questions for Army leadership.

How will we proceed to inform all of our leaders about the recent medical advancements regarding HIV and eliminate stigmas that are based on out-of-date information? (Brundage, Hunt, and Clark 2015, 11-12; Kose et al. 2012). Additionally, given medical advancements in treating HIV, should the U.S. Army join the other U.S. military services and adjust its current HIV policies and procedures? These are some of the questions that will be explored by the author in this thesis while providing Commanders with updated information and insight on the future of HIV-positive Soldiers.

### Background

“According to estimates by the WHO (World Health Organization) and UNAIDS (United Nations AIDS), 36.7 million people were living with HIV globally at the end of 2015. That same year, some 2.1 million people became newly infected and 1.1 million died of HIV related causes” (WHO 2016).

The AIDS Institute and the CDC describe the general belief that HIV was initially transferred to humans by members of indigenous tribes in Africa who consumed ape meat that was not fully cooked or were bitten by infected apes (TAI 2017; CDC 2016c). A century later, there are two versions of the virus found in humans. HIV-2 is the direct virus that originated in Africa, but over the course of a century HIV-2 mutated into HIV-

1, which is more commonly found in the U.S. and other dense population centers (TAI 2017; CDC 2016c). HIV was not officially discovered until the early 1980s by Dr. Rivert Gallo and Dr. Luc Montagnier (NIH 2017). The U.S. military and the overall U.S. infection rates “disproportionally affects younger and more active populations to include African Americans, Hispanics, Latinos, Asians, Pacific Islanders and males who have sex with men” (IDCRP 2017; MEDCOM 2017; CDC 2016a; MHRP 2015). HIV can be transmitted through “Only certain body fluids - blood, semen, pre-seminal fluid, rectal fluids, vaginal fluids and breast milk - from a person who has HIV can transmit HIV” (CDC 2016f). “These fluids must come in contact with a mucous membrane or damaged tissue or be directly injected into the bloodstream (from a needle or syringe) for transmission to occur” (CDC 2016f). This means HIV can be spread through sex, birth, the use of contaminated needles during drug abuse, medical procedures with contaminated instruments or supplies and other actions where subjects are exposed to contaminated blood or a carrying bodily fluid where skin is broken (CDC 2016f). “HIV is not transmitted by air, water, saliva, sweat, tears, closed mouth kissing, insects, pets, sharing toilets, sharing food or drinks” (CDC 2016f).

Prevention of HIV historically has focused on abstinence and monogamous relationships, clean needles and sanitary medical practices. Other well-known solutions to reduce the chances of contracting HIV include the use of latex condoms. Additionally, people who suspect they have been infected can seek out medical care within 72 hours of contraction (CDC 2016d). By taking ART for the next thirty days, it can prevent the initial reproduction of HIV in the human body (CDC 2016d). This medical prevention treatment is called Post-Exposure Prophylaxis (PEP) and is intended for emergency

situations (CDC 2016d). This treatment has proven effective in preventing the contraction of HIV, yet “it is not a 100% guarantee” (CDC 2016d). Additionally, the CDC highlights that if an individual is living in a high-risk environment of contracting HIV they are able to take medication that will lower the chances of contracting the virus in their daily activities (CDC 2016e). This medical preventive treatment is called Pre-Exposure Prophylaxis (PrEP) (CDC 2016e). Both of these prevention treatment methods “are not 100% guaranteed,” but they are a way for medical professionals and others to help prevent the accidental spread of HIV (CDC 2016e; CDC 2016d). When prevention fails and contraction occurs, it is important to understand the lifecycle of HIV to AIDS.

There are three stages of HIV the human body experiences once infected (CDC 2017b). The CDC describes stage one as initial contraction of HIV, which produces symptoms similar to the flu and lasts a few weeks (CDC 2017b). This occurs within two to four weeks after being infected (CDC 2017b). Stage two, clinical latency (HIV inactivity or dormancy), exhibits very little symptoms but lasts for a decade if not longer depending on the health of the infected individual (CDC 2017b). The third stage, Acquired Immunodeficiency Syndrome (AIDS), is the stage of transition where the human body’s immune system has been completely compromised by the virus rendering the advancement of AIDS (CDC 2017b). This final stage is where most previously healthy individuals suffer from opportunistic illnesses (CDC 2017b). A healthy immune system typically can control and fight off opportunistic illnesses but when an individual has HIV/AIDS the threat of infection often becomes a grave battle between life and death (CDC 2016c). “What is the most common life-threatening opportunistic infection affecting people living with HIV? Tuberculosis (TB), killed 390,000 people living with

HIV in 2015” (WHO 2016). To prevent opportunistic infections, HIV-positive patients are heavily reliant on HIV treatment and adhering to a specific lifestyle (CDC 2016c; CDC 2016g; CDC 2016b).

Since the late 1990s, treatment for HIV has progressed and today there are multiple Antiretroviral Treatments (ART) that will prevent the virus from reproducing in the human body (IDCRP 2017; CDC 2016g). Although this treatment is not a cure, it does limit the progression of HIV and stabilizes the infected individual by reducing the virus in the body to minimal numbers (CDC 2016g). This treatment is achieved by taking a daily pill (CDC 2016g; DoD 2014, 7). ART lengthens the lives of those with HIV to standard lifespans of a human who is not infected with HIV (CDC 2016g; DoD 2014, 9). This medication is expensive and can vary with each individual’s different medical needs (AIDSinfo 2016). Despite successful reduction of the HIV virus while on ART, “it has been found that many develop serious non-AIDS events including neurocognitive disorders, cardiovascular diseases, renal diseases, and cancer” (IDCRP 2017). Additionally, the implementation of ART can cause Immune Reconstitution Inflammatory Syndrome (IRIS), which causes a disease or pathogen specific inflammatory response in HIV patients (HIV Clinical Resource 2009; IDCRP 2017). Yet, a recent study found a “low prevalence of neurocognitive impairment in early diagnosed and managed HIV-infected persons” (Crum-Cianflone et al. 2013). ART requires a strict, regimented lifestyle for those with HIV in regards to participation and avoidance of unnecessary hazards that could lead to other complications (CDC 2016c; CDC 2016g; DoD 2014, 7; CDC 2016b). According to the CDC, people with HIV who are treating the virus with ART should still consider precautions to avoid contracting opportunistic



infections from the surrounding environment, what they consume, and whom they associate with (CDC 2016c; CDC 2016g; CDC 2016b).

### Primary Research Question

Medical advancements have successfully lengthened the lifespans of HIV-positive Soldiers and stabilized the virus from progressing to AIDS (CDC 2016g; DoD 2014, 7, 9). Since living with HIV has become more manageable with a one pill a day treatment and strict lifestyle choices, it raises a question concerning policies and procedures regarding HIV-positive Soldiers in the U.S. Army (CDC 2016g; CDC 2017a; DoD 2014, 7). “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

Currently, the U.S. Navy and U.S. Air Force have adapted to the recent medical advancements and adjusted their policies to allow eligible HIV-positive Service Members to serve overseas (DN 2013, 1-13; DN 2012, 1-23; DAF 2014, 1-44). However, given the specific mission set of the U.S. Army as a land force, is this criteria an ethical discriminator? This thesis explains current HIV treatment to educate leaders and explore if medical advancements and treatments should open career opportunities for eligible Soldiers who are currently restricted due to their HIV-positive medical status.

### Secondary Research Questions

To answer the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?” the author researched and answered secondary questions. These related research questions range from the medical advancements that have reshaped the fight

against HIV, to the discussion of existing HIV policies with medical professionals and finally, what is required for an HIV-positive Soldier to serve overseas. These questions were researched during a literature review and were used to structure interview questions for the United States Army Medical Command. The secondary questions are:

1. How has the Infectious Disease Control Center been able to stabilize Service Members with HIV enabling them to serve overseas?
2. Is the U.S. Army HIV contraction/retention rate increasing?
3. Are there any threats to national security by employing HIV-positive Service Members in OCONUS assignments?

At the start of this thesis there were five secondary questions but because of the draft human research policy restrictions and a lack of public information, the author was unable to gather enough recent data to answer all of the secondary questions. These unanswered questions include, “Are HIV-positive Soldiers as competitive for promotions given the lack of opportunity for tactical assignments and overseas tours?” and “Do senior Army leaders feel confident in having HIV-positive Soldiers in their overseas Area of Responsibility (AOR)?” (DoD 2014, 7). These secondary questions highlight the complexity of this topic and the lack of answers will assist this thesis and future research.

### Assumptions

The primary research question of, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?” is based upon a number of assumptions. This study assumes that there are Soldiers who are prescribed a specific medical treatment that reduces the quantities of the

virus in the human body and who are physically fit and mentally dedicated to a strict lifestyle to serve in OCONUS assignments.

The second assumption is that there are Status of Forces Agreements (SOFA) that do not restrict U.S. military personnel who are HIV-positive from being stationed in an OCONUS assignment.

The third assumption is that U.S. Army medical facilities in overseas locations are equipped to take extra precautions when working with an HIV-positive Soldier.

The fourth assumption is that other U.S. military services that have adjusted their HIV OCONUS policies have HIV-positive Service Members serving in OCONUS assignments. In relation to this assumption it is also assumed that there has not been a compromise to national security in allowing HIV-positive Service Members to serve in OCONUS assignments given the policies have remained.

### Definitions and Terms

Antiretroviral Therapy: The use of a combination of antiretroviral drugs in the treatment of HIV infection. Highly active antiretroviral therapy typically involves the use of three or more antiretroviral drugs from at least two different classes. (Merriam Webster Dictionary 2017a).

Duty: Fulfill your obligations. Doing your duty means more than carrying out your assigned tasks. Duty means being able to accomplish tasks as part of a team. The work of the U.S. Army is a complex combination of missions, tasks and responsibilities — all in constant motion. Our work entails building one assignment onto another. You fulfill your obligations as a part of your unit every time you resist the temptation to take “shortcuts” that might undermine the integrity of the final product (U.S. Army 2017a).

Fit for Duty: The Soldier has been determined to be fit for duty, not entitled to separation or retirement because of physical disability after complete processing under AR 635-40, *Physical Evaluation for Retention, Retirement, or Separation* (DA 2016, 85).

Highly Active Antiretroviral Therapy: The use of a combination of antiretroviral drugs in the treatment of HIV infection. Note: Highly active antiretroviral therapy typically involves the use of three or more antiretroviral drugs from at least two different classes. (Merriam Webster Dictionary 2017b).

HIV: Either of two retroviruses that infect and destroy helper T-cells of the immune system causing the marked reduction in their numbers that is diagnostic of AIDS - also called AIDS virus, human immunodeficiency virus (Merriam Webster Dictionary 2017c).

HIV-1: A retrovirus of the genus Lentivirus that is the most prevalent HIV (Merriam Webster Dictionary 2017d).

HIV-2: A Lentivirus that causes AIDS especially in western Africa, is closely related in structure to SIV of monkeys, and is less virulent than HIV-1 (Merriam Webster Dictionary 2017e).

Honor: Live up to Army values. The nation's highest military award is the Medal of Honor. This award goes to Soldiers who make honor a matter of daily living—Soldiers who develop the habit of being honorable and solidify that habit with every value choice they make. Honor is a matter of carrying out, acting, and living the values of respect, duty, loyalty, selfless service, integrity and personal courage in everything you do. (U.S. Army 2017a)

Integrated Disability Evaluation System (IDES): A joint process established by the Department of Veterans Affairs (VA) and the Department of Defense that includes a single set of disability medical examinations and disability rating for use by both departments (U.S. Army 2017b).

Integrity: Do what's right, legally and morally. Integrity is a quality you develop by adhering to moral principles. It requires that you do and say nothing that deceives others. As your integrity grows, so does the trust others place in you. The more choices you make based on integrity, the more this highly prized value will affect your relationships with family and friends, and, finally, the fundamental acceptance of yourself (U.S. Army 2017a).

Loyalty: Bear true faith and allegiance to the U.S. Constitution, the Army, your unit and other Soldiers. Bearing true faith and allegiance is a matter of believing in and devoting yourself to something or someone. A loyal Soldier is one who supports the leadership and stands up for fellow Soldiers. By wearing the uniform of the U.S. Army, you are expressing your loyalty. And by doing your share, you show your loyalty to your unit (U.S. Army 2017a).

Neurologic Deficiency: A neurologic deficit refers to abnormal function of a body area due to weaker function of the brain, spinal cord, muscles, or nerves (Medline Plus 2015).

Personal Courage: Face fear, danger or adversity (physical or moral). Personal courage has long been associated with our Army. With physical courage, it is a matter of enduring physical duress and at times risking personal safety. Facing moral fear or adversity may be a long, slow process of continuing forward on the right path, especially

if taking those actions is not popular with others. You can build your personal courage by daily standing up for and acting upon the things that you know are honorable (U.S. Army 2017a).

Respect: Treat people as they should be treated. In the Soldier's Code, we pledge to "treat others with dignity and respect while expecting others to do the same." Respect is what allows us to appreciate the best in other people. Respect is trusting that all people have done their jobs and fulfilled their duty. And self-respect is a vital ingredient with the Army value of respect, which results from knowing you have put forth your best effort. The Army is one team and each of us has something to contribute (U.S. Army 2017a).

Renal Disease: The final stage of kidney failure (as that resulting from diabetes, chronic hypertension or glomerulonephritis) that is marked by the complete or nearly complete irreversible loss of renal function (Merriam Webster Dictionary 2017f).

Selfless Service: Put the welfare of the nation, the Army and your subordinates before your own. Selfless service is larger than just one person. In serving your country, you are doing your duty loyally without thought of recognition or gain. The basic building block of selfless service is the commitment of each team member to go a little further, endure a little longer, and look a little closer to see how he or she can add to the effort (U.S. Army 2017a).

Serology: A medical science dealing with blood serum especially in regards to its reactions and properties; also: the testing of blood serum to detect the presence of antibodies against a specific antigen (Merriam Webster Dictionary 2017g).

Status of Forces Agreements: They define legal status of U.S. Department of Defense (DoD) personnel, activities, and property in the territory of another nation and set forth rights and responsibilities between the United States and the host government. (U.S. Department of State 2015, 1).

Tuberculosis: A highly variable communicable disease of humans and some other vertebrates that is caused by the tubercle bacillus, and rarely in the United States by a related mycobacterium, that affects especially the lungs but may spread to other areas and that is characterized by fever, cough, difficulty in breathing, formation of tubercles, caseation, pleural effusions and fibrosis (Merriam Webster Dictionary 2017h).

#### Limitations and Delimitations

As of 2012, the U.S. Navy adjusted its HIV policy to allow eligible HIV-positive Service Members to serve in OCONUS assignments (DN 2012, 1-23). In 2014, the U.S. Air Force adjusted its HIV policy to allow waivers for HIV-positive Service Members to serve in OCONUS assignments (DAF 2014, 6). Due to the relatively recent change in policy, there is a lack of research data readily available to the public. This also includes specific information ranging from the overall costs of HIV treatment in the U.S. Army to national security concerns related to HIV-positive Service Members serving in OCONUS assignments.

The author focused on active duty Soldiers in the U.S. Army as a prescribed delimitation. Although, the author referred to and compared other HIV policies from the U.S. Navy and the U.S. Air Force. The author will only discuss HIV and may mention, but not focus on, other blood-borne viruses that have similar policies and restrictions in the U.S. Army. The intent of this delimitation is to refine the authors intent in this thesis.

The author invites others to conduct research on more diverse populations serving our military, other policies restricting HIV-positive Service Members from career advancement opportunities, and other blood-borne viruses that have similar policy restrictions. The author only addressed HIV policies regarding OCONUS assignments and did not fully address the topic of HIV-positive Service Members serving in combat zones and austere locations.

The U.S. Army and modern technology have limits and until treatments and technology improve, we are limited based on the acceptable risk we as leaders will assume and place on HIV-positive Service Members (Defense Health Board 2008, 4-6; DA 2014a, 22). HIV-positive Soldiers serving in combat zones and austere environments creates a risk that the U.S. Army is currently unable to mitigate (Burke 2013). This risk includes the possible transmission of HIV through untested blood supplies in a mass causality event and the inability to ensure medical confidentiality of HIV-positive Soldiers (Burke 2013; Defense Health Board 2008, 4-8). Medical professionals depend on those in uniform to donate blood supplies on demand in forward locations where blood supplies are expensive or impractical to maintain (Defense Health Board 2008, 4-8; Burke 2013). From the HIV-positive Soldier perspective, being put in a situation that requires mass donation can be problematic. “Refusal to do so (donate) in cases of mass casualties, etc., will cause other members to question why and may make it difficult for the patient to keep their diagnosis confidential. Also, if there was pressure to donate blood and the patient did so, there could be HIV transmission in the deployed setting” (Burke 2013). The U.S. Army should not incur unnecessary risk to the lives of HIV-positive Soldiers by stationing them in an unsanitary environment where they are



susceptible to opportunistic infections that are easily transmittable (WHO 2016; CDC 2016b). In the future with more research, improved treatments and better technology, these risks will hopefully be studied and eventually mitigated.

### Chapter Summary

In chapter 2 the author highlights the consolidation of research through a literature review. The literature review is based upon information on HIV in the U.S. military. The author focused on explaining information that is required to understand the history of HIV in the U.S. military, its legal authority to create policies on HIV and finally, how the U.S. Army is fighting HIV. This information will provide context in understanding the topic before addressing the primary and secondary questions. This analysis will add to the legitimacy of this study as it answers the secondary questions and primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

## CHAPTER 2

### LITERATURE REVIEW

#### Chapter Introduction

While investigating the secondary questions and the primary research question, a literature review about HIV in the U.S. military and the previous background information about HIV found in chapter 1 established a starting point for the reader for further analysis. This information highlights the capabilities of treatments, requirements and vulnerabilities related to the current status of HIV in the U.S. military. This enables the author to better explain the data, conclusions and recommendations in future chapters to the reader. The themes for the literature review are based upon the history of HIV in the U.S. military, the legal authority the U.S. military has to establish an HIV policy and finally, how the U.S. military is fighting HIV.

#### History of HIV in the U.S. Military

Since late 1985, the U.S. military has participated in a “total force screening program” in an effort to properly diagnose existing and identify newly HIV-infected Service Members (DN 2010, 7; BAMC 2016). The intent of the program was to test all Service Members within two years and then test the same Service Members again two years later (DN 2010, 7). Additionally, “In 1986, the U.S. Congress mandated the formation of the United States Military HIV Research Program (USMHRP) in order to address this devastating disease through research and vaccine development” (BAMC 2016). “This program was centered at the Division of Retrovirology (DR) at the Walter Reed Army Institute of Research (WRAIR)” (BAMC 2016). “Through this mandate, the

DoD Natural History Study was formed in 1987 under the direction of the Department of Clinical Interventions, DR” (BAMC 2016). By 1991, both the U.S. Air Force and the U.S. Navy had unified efforts to establish the “Tri-Service HIV program” (BAMC 2016). In 1996, “Brooke Army Medical Center joined the program” (BAMC 2016). The start of HAART on HIV-positive military personnel began in early 1996 (IDCRP 2015; CDC 2016g). This treatment was the initial concept of multiple antiretroviral drugs used to treat HIV (CDC 2016g). “In 2002, the U.S. Military entered into an agreement with the National Institute of Allergy and Infectious Diseases (NIAID) at the National Institutes of Health (NIH) that established a consortium to conduct research involving HIV-infected military members and their dependents” (BAMC 2016). As new programs and more institutions became involved over time with the research of HIV, there were multiple adjustments and moves until the program was finally moved in 2007 to BAMC to form what it is today as the San Antonio Military Medical Center (SAMMC) Infectious Disease Service and HIV program (BAMC 2016).

### Legal Authority

The legal authority to restrict Service Members from serving overseas has been reviewed over the years but ultimately the Department of Defense has provided instructions on how to implement general standards for Service Members who will deploy overseas and in harm’s way. These legal authorities can be found in a number of documents pertaining to their specific topic but they all support the military service or Combatant Command surgeon deciding if a Service Member is fit for overseas duty (DoD 2014, 7). Key documents include DoD Instruction 6485.01, *Human Immunodeficiency Virus*, DoD Instruction 6490.03, *Deployment Health*, and DoD

Instruction 6490.07, *Deployment-Limiting Medical Conditions for Service Members and DoD Civilian Employees* (DoD 2013; DoD 2011; DoD 2010). These DoD instructions provide legal authority to the branches of the military to set policies and procedures pertaining to their specific missions.

### How the United States Army is Fighting HIV

Based on a 2014 DoD *Report to Congressional Defense Committees on Department of Defense Personnel Policies Regarding Members of the Armed Forces with HIV or Hepatitis B*, the U.S. Army is “currently revising the policies governing the management of Service Members infected with HIV or Hepatitis B” (DoD 2014, 11). Until new policies are published, the U.S. Army has established policies and surveillance programs based upon a systematic routine of screening its entire force every two years (DA 2014a, 21, 29). HIV testing can also occur before Permanent Change of Stations (PCS) overseas and before significant formalized training in a military Service Member’s career path (DA 2014a, 21-22). It only takes a simple blood draw at a medical facility to test for the virus and within a number of weeks the results are posted securely online to the Service Member’s medical readiness status. This test is referred to as the Western Blot, which “detects specific antibodies to components of a virus” (DA 2014a, 55). This leads us to exposure to HIV and what the U.S. Army is doing to counter it.

Suspected exposure to HIV is not just taking an HIV test and a waiting for the results. The U.S. Army provides Soldiers with options to prevent them from being infected as long as they are treated correctly based on medication and time since the initial exposure (CDC 2016d; Munson 2017a). Some situations differ based on the circumstances/method of exposure, but there are proactive measures that can be taken.

For instance the "Blood-borne Pathogen Protocol", from the Fort Leavenworth Infectious Disease Prevention Office, which is found in Appendix A, provides a list of steps (Munson 2017a). The steps include initial treatment of the infection area, reporting the possible contraction, seeking medical care, medication that may be prescribed and follow-up testing procedures to confirm or deny the contraction of HIV(Munson 2017a).

If there is a positive HIV test, Appendix B provides an excerpt from AR 600-110, *Identification, Surveillance, and Administration of Personnel Infected with Human Immunodeficiency Virus*, which describes the roles and responsibilities in notifying the HIV-positive Soldier (DA 2014a, 6-8). This includes confirmation of the identity of the Soldier, their assigned unit and how this sensitive topic is handled with care to minimize any additional stress upon the HIV-positive Soldier (DA 2014a, 6-8).

If the Soldier has been confirmed HIV-positive by a secondary confirmation test, the results are then forwarded to the Armed Forces Health Surveillance Center (DA 2014a, 17). Then the results are sent to the Medical Protection System (MEDPROS) individual medical readiness office to update the Soldier's medical status (DA 2014a, 17). In absence of this process, the HIV program coordinator will directly enter positive results into the MEDPROS website (DA 2014a, 17). The entry will be a V code and the medical non-deployable status will be adjusted (DA 2014a, 17). There will not be an immediate change in the Soldier's medical status depicted in Physical, Upper, Lower, Hearing, Eyes, Psychiatric (PULHES) (DA 2014a, 17).

The names of HIV-positive Soldiers are then sent to the U.S. Army Human Resources Command where their medical status is coded to prevent assignments to units that will deploy and if needed, look at reassignment to a unit that does not deploy while

the Soldier undergoes a Medical Evaluation Board (MEB) and if applicable, a Physical Evaluation Board (PEB) (DA 2014a 14; DA 2016, 23).

“For Active Army Soldiers and RC Soldiers on active duty for more than 30 days (except for training under 10 USC 10148), an MEB must be accomplished and, if appropriate, the Soldier must be referred to a PEB under AR 635–40, (*Physical Evaluation for Retention, Retirement, or Separation*)” (DA 2016, 23). The MEB provides a medical snapshot of the Soldier’s current health, specifically how advanced the virus is and if there are any other health concerns that could cause complications due to now having HIV (DoD 2014, 8; DA 2014a, 5, 33; DA 2016, 33; DA 2014b, 56-57). Additionally, “HIV infected Soldiers who demonstrate rapidly progressive clinical illness or immunological deficiency may not meet medical retention standards under AR 40–501, and will be evaluated for physical disability processing under AR 635–40” (DA 2014a, 5). Findings of the MEB will be given to the HIV-positive Soldier and the individual is given three working days to write a statement if they disagree with any of the findings (DA 2014b, 53, 61). If deemed appropriate, this information and all medical records are then sent to a PEB within thirty days of completion, not to exceed ninety days (DA 2014b, 53).

The PEB provides a determination of the physical competency of the Soldier based upon the information from the MEB (Kem 2017). This includes assessing if the Soldier is physically capable of performing their MOS duties and responsibilities to the set standards of the U.S. Army given their disability/medical status (Kem 2017). The board specifically assesses the Soldier’s disability based upon their MOS, rank, position, and rating (DA 2006, 15). The board will also review a number of items including how

medical treatments have changed and if the health or disability/medical status has or has not improved (DA 2006, 15). The board will also review if any conditions existed prior to serving in the U.S. Army and if any conditions were accepted at the time of entry into the U.S. Army (DA 2006, 15). Additionally, the board will review if the medical condition will interfere with and/or deteriorate with continued service (DA 2006, 15). Finally, the board will review any conditions that will not be aggravated by service and entitlements to benefits (DA 2006, 15). The PEB is a crucial step in determining if an HIV-positive Soldier is eligible to serve in an OCONUS assignment.

Currently AR 600-110, *Identification, Surveillance, and Administration of Personnel Infected with Human Immunodeficiency Virus*, states that HIV-positive Soldiers are restricted from being assigned outside of the U.S. and/or deploying to combat zones (DA 2014a, 22). As stated earlier in the DoD report to Congress, the U.S. Army is revising policies to account for medical advances for HIV-positive Soldiers. (DoD 2014, 9). AR 40-501, dated December 2016, further clarifies that HIV-positive Soldiers “will not deploy into combat theater of operations” and “If found fit by a PEB, the Soldier may deploy to Europe or Korea depending on host nation approval” (DA 2016, 62). A source of information on HIV travel and entry restriction by country can be found at [www.hivtravel.org](http://www.hivtravel.org) (DN 2013, 5).

A 2014 DoD *Report to Congress on Personnel Policies regarding members of the Armed Forces with HIV or Hepatitis B*, states “A waiver is required for service members with an HIV or HBV infection to deploy” (DoD 2014, 11). “As with other medical conditions requiring a waiver, many factors that the service member will encounter during the deployment are considered to determine whether it is likely the medical

condition will limit the service member's performance or cause the medical condition to deteriorate" (DoD 2014, 11). Additionally, the Combatant Command Surgeon is required to review the waiver and the final approval comes from the Combatant Commander (DoD 2014, 7). This runs parallel with the other military services who have already revised their policies.

AR 40-501, *Standards of Medical Fitness*, emphasizes the importance of medical conditions receiving the same level of medical care while stationed in a CONUS or OCONUS assignment (DA 2016, 61). This too is important for HIV-positive Soldiers (DoD 2014, 7). The justification of not being able to provide adequate care in combat zones is one of the factors that decides if a Soldier can be stationed in a specific location (DA 2014a, 22). Another decision point is safeguarding the medical status of the Soldier in a combat zone when the Army depends upon Soldiers to maintain blood supplies (Burke 2013). According to DoDI 6490.07, *Deployment Limiting Medical Conditions for Service Members and DoD Civilian Employees*, Service Members with the following medical conditions may not deploy unless a waiver is granted: "active tuberculosis or known blood-borne diseases that may be transmitted to others in a deployed environment" (DoD 2010, 11). Additionally, "a diagnosis of human immunodeficiency (HIV) antibody positive with the presence of progressive clinical illness or immunological deficiency" (DoD 2010, 11).

In comparison, the U.S. Navy currently has a policy that allows Service Members to serve in OCONUS assignments if they meet the standards to serve (DN 2012, 1-23; DN 2013, 1-13). This policy change was because of three factors. First, "there is no demonstrated risk of contraction of infection in normal daily activities" (DoD 2014, 7).



Second, “an investment in training of these individuals has been made” (DoD 2014, 7).

Third, “the previous policy of denying deployments was making this subset of personnel less competitive in achieving career milestones or warrior qualifications” (DoD 2014, 7).

The U.S. Navy also made this decision because of “advances in medical treatment which have significantly simplified the disease management of individuals with HIV” (DoD 2014, 7). As long as the HIV-positive Service Member is considered to have a “controlled HIV infection as manifested by an unimpaired immune system, no current viremia, an established history of compliance with medical treatment and a history of professional attitude” they are able to serve in overseas locations (DoD 2014, 7; DN 2012, 10; DN 2013, 4). These standards enable the U.S. Navy to maximize their manpower to its fullest potential and give HIV-positive Service Members hope.

The U.S. Air Force HIV policy regarding OCONUS assignments for HIV-positive Service Members requires a waiver for assignments in OCONUS mobility positions (DAF 2014, 6). “Essentially, if the OCONUS base is in need of the position and willing to take on the member and can provide adequate care, then it's more likely to get accepted” (Burke 2013). Additionally, the policy requires the Service Member to undergo an annual evaluation at the San Antonio Military Medical Center (SAMMC) (DAF 2014, 6).

U.S. Army “family members who are HIV-positive are not restricted” by AR 600-110 “from accompanying their sponsor overseas; however, host nation rules apply” (DA 2014a, 35). In an interview with an HIV subject matter expert from MEDCOM, this topic was elaborated on. “Yes, dependents of active duty SMs (Service Members) are currently being followed at our only OCONUS facility where HIV specialists are embedded”

(MEDCOM 2017). This highlights that if Germany allows entry to the dependent, then the assumption is HIV-positive Soldiers can also receive the same care at Landstuhl Regional Medical Center (MEDCOM 2017). The HIV-positive family member should enroll in the Exceptional Family Member Program which could restrict command sponsorship in locations that do not have adequate medical facilities to treat HIV. Although, it is important to note that the HIV status of family members is not reported to the chain of command because of the Health Insurance Portability and Accountability Act (HIPAA) (DA 2016, 35).

Training and education about HIV within the U.S. Army is critical in aiding prevention, eliminating stigmas and professionally knowing your Soldiers and junior leaders (DA 2014a, 39-40; Kose, et al. 2012; MHRP 2015). The education plan listed in chapter 10 of AR 600-110, *Identification, Surveillance, and Administration of Personnel Infected with Human Immunodeficiency Virus*, lists five basic topics which are: prevention, UCMJ training for Commanders, awareness training on HIV policies, training for medical staff and finally, family member education/resources (DA 2014a, 39-40). Training for UCMJ Commanders is a critical portion in the overall understanding and treatment of HIV-positive Soldiers.

Education and training about HIV prevention, facts and treatments will greatly assist in preventing the contraction and transmission of HIV and reduce any stigma associated with HIV (Kose et al. 2012; DA 2014a, 39-40; MHRP 2015). This is critical in helping reduce issues in the workplace that may arise because of fear or anxiety of contracting the virus based on a lack of factual information. Although a Service Member's medical status is protected, if specific information is made public to their co-

workers by the HIV-positive Service Member, it is optimal to have already completed HIV education/training (DA 2014a, 39-40). If an issue should arise after a Service Member shares their HIV-positive status, the UCMJ Commander may need to get involved. AR 600-110, *Identification, Surveillance, and Administration of Personnel Infected with Human Immunodeficiency Virus*, states, “There is no medical basis for employees refusing to work with fellow employees or agency clients who are or are suspected of being, HIV infected” (DA 2014a, 36). The UCMJ Commander should get involved and address any concerns with education and by counseling the concerned individual that “nonsexual person-to-person contact that generally occurs among workers and clients or consumers in the workplace does not pose a risk for transmission of HIV and/or AIDS” (DA 2014a, 36). “If an employee’s continued refusal to work with a person with HIV or AIDS results in disruption in the workplace, appropriate disciplinary action may be taken against the employee” (DA 2014a, 5). Additional information is provided to Commanders about how to interact with HIV-positive employees and how to address any issues is found in chapter 8 of AR 600-110.

### Chapter Summary

In chapter 3, the author describes the research methodologies used to ensure legitimacy of this thesis. Now that the reader understands the information in chapter 2 to include the history of HIV in the U.S. military, the legal authorities granted by the DoD and how the U.S. Army is fighting HIV, this enables the reader to gain knowledge and perspective on the research topic. Along with chapter 1’s background information on HIV, chapter 2 enabled the author to answer multiple secondary questions and partially answer the primary research question, “Should the United States Army adapt new

conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

## CHAPTER 3

### METHODOLOGY

#### Chapter Introduction

This research methodology including the research design, evaluation criteria and threats to validity are in this chapter. The research design was conducted through a step-by-step method to build knowledge of the topic and address the secondary research questions in an effort to build enough data to answer the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

#### Research Design

The research methodology of this thesis is based upon a qualitative analysis done by a literature review and structured interview with a subject matter expert. This is accomplished through a step-by-step approach that educates the reader on the current HIV situation. Next, it is important that the reader is knowledgeable about the thesis topic to value the evaluation of data and analysis. Finally, the intent is for the reader to draw conclusions based upon the evaluated data and identify where future research needs to be conducted.

Step one can be found in chapters 1 and 2, the introduction and the literature review. The introduction provides general information about HIV from official government sources and medical professionals. The literature review establishes a basic understanding of HIV in the U.S. Army based on policies in an effort to properly understand current rules and efforts that surround this very sensitive topic. This

understanding also includes how HIV has affected the U.S. military and how the U.S. military is combating HIV. Additionally, a structured interview with a subject matter expert provided updated information that was not readily available to the public. This research consolidates information to answer secondary questions and identify what secondary questions still could not be answered. In result, this information provides a consolidated source of information to leaders to better understand their formation and what evolving trends and practices are taking place to help bring awareness and prevention while exploring the primary research topic (MHRP 2015).

Step two can be found in chapter 4 where the researched data is scrutinized based on legal and moral considerations in the evaluation criteria while dissecting the secondary questions and primary research question. The data collected in the literature review and interview are used to evaluate the overall criteria of the secondary research questions. This was done by identifying significant, moderate and minimal concerns that violate the U.S. Army values and/or cause risk to Soldiers, units, the U.S. Army and/or national security. The overall assessment is provided to properly communicate the findings to the reader. This methodology provides a balanced approach while accounting for validity to answer the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

Step three can be found in chapter 4 where the researched data is scrutinized based on efficiency in the evaluation criteria while dissecting the secondary questions and primary research question. The evaluation of the data collected in the literature review and interview are used to evaluate the overall criteria of the secondary research questions.

This was done by identifying significant, moderate and minimal concerns that violate the U.S. Army values and/or cause risk to Soldiers, units, the U.S. Army and/or national security. The overall assessment provided properly communicates the findings to the reader. This methodology provides a balanced approach while accounting for validity to answer the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

Step four is found in chapter 4 where the researched data is scrutinized based on effectiveness considerations in the evaluation criteria while dissecting the secondary and primary research questions. The data collected in the literature review and interview are used to evaluate the overall criteria of the secondary research questions. This was done by identifying significant, moderate and minimal concerns that violate the U.S. Army values and/or cause risk to Soldiers, units, the U.S. Army and/or national security. The overall assessment is provided to properly communicate the findings to the reader. This methodology provides a balanced approach while accounting for validity to answer the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

Step five is found in chapter 4, the presentation and analysis of data. The aggregation of data streamlines answers to the secondary questions, which provides conclusions for the primary research question. The author acknowledges that not all questions were answered entirely and there is a need to conduct further research on some secondary questions because of the lack of publicly available data. The aggregation of data on HIV in the U.S. Army provides answers to the secondary questions and a

conclusion to the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

Step six is found in chapter 5, the conclusion and recommendations. Based upon the evaluation of the research data, a conclusion is provided to address the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?” Additionally, recommendations to decision makers are provided along with any recommendations for future research because of the limitations and delimitations of this thesis.

### Evaluation Criteria

The evaluation criteria dissects the secondary questions and primary research question. This process brings standardization to help evaluate the research questions based upon the data that has been collected through the literature review and interview. The purpose of the evaluation criteria is to assess the overall suitability, acceptability, feasibility and a distinguishable outcome, which is more commonly known as screening criteria (Kem 2012, 222-223). The criteria used by the author to evaluate the secondary questions and data are legal/ethical considerations, efficiency of costs and resources and finally, effectiveness in contributing to the overall U.S. Army mission. The majority of information was cited from subject matter experts’ input to ensure validity while answering the secondary questions and the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”



In measuring these criteria, this research brings value to identified requirements and vulnerabilities that are measured in terms of concern ranging from significant to moderate to minimal. For the purpose of this research, significant concerns are defined as a vulnerability that violates the core values of the U.S. Army or a requirement that is nonexistent and cannot be mitigated or reduced without risk to Soldiers, units, the U.S. Army and/or national security. Moderate concerns are defined as a requirement or vulnerability that has the potential to violate a core value of the U.S. Army or is currently not available but can be mitigated and/or reduce the risk to Soldiers, units, the U.S. Army and/or national security. Minimal concerns are defined as a requirement or vulnerability that currently does not have the potential to violate a core value of the U.S. Army and requirements are available, which then does not cause risk to Soldiers, units, the U.S. Army and/or national security. The U.S. Army Values are Loyalty, Duty, Respect, Selfless Service, Honor, Integrity and Personal Courage.

Table 1. Evaluation Criteria			
How has the Infectious Disease Control Center been able to stabilize Service Members with HIV enabling them to serve overseas?			
Question	Minimal Concern	Moderate Concern	Significant Concern
Legal and ethical considerations	X	X	X
Efficiency of costs and resources	X	X	X
Effectiveness in contributing to the overall U.S. Army mission	X	X	X
<b>Overall Evaluation</b>	X	X	X

*Source:* Developed by author.

### Threats to Validity

The author has previously worked with HIV-positive Soldiers while serving in the U.S. Army. Given this experience, the author recognizes internal validity of the perception of a personal bias (Garson 2013). To mitigate this perception of personal bias, the author sourced historical research conducted by medical and policy experts. The author will only provide an opinion as a U.S. Army officer after the data has been evaluated and analyzed. Some of these opinions could be seen as criterion validity as different HIV policies are compared amongst different military services, but this is mitigated by heavily weighing on specific policy updates by the U.S. Army and

evaluating options taken by other services as recommendations for topics for further study (Garson 2013). Additionally, the author is not a medical professional nor does the author or this research claim to be. Additionally, due to a lack of complete information on the thesis topic this could be seen as content validity (Garson 2013). To mitigate this concern, the author consolidates medical professionals' research that is available to the public and recently dated. The author also sought out information and a review from subject matter experts related to the overall research topic of, "Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?" Finally, once the research is compiled and complete, this thesis will most certainly be out-of-date as new developments in medical research pertaining to HIV continue to evolve through research. Yet the overall purpose of this thesis is to educate leaders and inspire further research on this topic or related topics pertaining to HIV-positive Soldiers in the U.S. Army.

### Chapter Summary

The presented research data and analysis help answer the secondary questions and provide a conclusion the primary research question, which are found in chapter 4. By understanding the research methodology to include the research design, evaluation criteria and threats to validity, this shapes the readers overall understanding of how the research was conducted while accounting for its strengths and limitations in answering the primary research question, "Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?"

## CHAPTER 4

### DATA PRESENTATION AND ANALYSIS

#### Chapter Introduction

Analysis on the research data from the literature review and subject matter expert interview is detailed by the author in this chapter. Chapter 4 also compares the data found against the evaluation criteria of each secondary question in an effort to provide analysis on how the data can or cannot answer the secondary questions. The answers to secondary questions enable the reader to draw conclusions about the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

Due to the sensitive nature of this topic, some secondary questions were unanswerable because of the limited amount of information available to the public and draft human research approval requirements. Given the short amount of time since recent changes to the HIV policies in the U.S. Navy and U.S. Air Force, research data on these current policies was not readily available (DN 2013 1-13; DN 2012 1-23; DAF 2014 1-44). Adhering to the current/draft policies and regulations that govern human research for a Master’s in Military Art and Science at the Command and General Staff College, some questions were unanswerable because conducting interviews requires a post Commander or unit Commander to approve all human subject interviews per draft AR 70-25, *Protection of Human Subjects in Research* (DA 2015, 19). For this reason, the delimitations were expanded to focus the research on an achievable topic within the given timeline of the Command and General Staff College’s Master’s in Military Art and Science program (MMAS). Every effort has been made to answer every secondary

question but within the rules, regulations and ethics of human research under the MMAS program. For this reason, some of the original secondary questions could not be answered because of a lack of information.

### Step One: Summary of Literature Review

Information from recent news articles on possible current social trends and official contraction and retention rates of HIV-positive Soldiers within the U.S. and the Army as of 2016 were provided in chapter 1 and chapter 2. The literature review also highlighted a brief history about HIV and what we have learned about the virus over the years. This includes the stages of HIV, treatments that have changed the lives of many HIV-positive people and finally, most importantly, prevention from an educational and medical treatment perspective (CDC 2016g; CDC 2016f; CDC 2016d; CDC 2016e; MHRP 2015; IDCRP 2017). In chapter 2 the author described a brief history of how the U.S. military has been involved in fighting HIV, which has greatly contributed to the current progress we have today. Legal authorities were discussed, specifically to the primary research question on assignments to OCONUS locations. This transitioned to how the U.S. Army is currently fighting HIV and its policies and procedures for HIV-positive Soldiers (BAMC 2016; DA 2014a, 1-56; DA 2016, 62). These policies were compared to current U.S. Navy and U.S. Air Force policies regarding OCONUS assignments and why they have recently changed (DN 2013, 1-13; DN 2012, 1-23; DAF 2014, 1-44). Finally, training and education was discussed to help highlight its importance to units in prevention, in eliminating any possible stigmas associated with HIV, and to answer the primary research question, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to

serve overseas?” (Brundage, Hunt, and Clark 2015, 11-12; Kose et al. 2012; DA 2014a, 39-40; MHRP 2015).

### Step Two: Legal and Ethical Considerations

In regards to the first of the secondary questions, “How has the Infectious Disease Control Center been able to stabilize Service Members with HIV enabling them to serve overseas?”, the U.S. Navy has established clear expectations of its HIV-positive Service Members who wish to serve in OCONUS assignments. This criteria is based upon the Service Member’s medical status, personnel actions and the needs of the U.S. Navy and the Service Member (DN 2012, 10). The U.S. Air Force also established a policy that allows a waiver process where if the investment has been made and the Command is capable and willing to employ the Service Member, then the waiver can be granted (DAF 2014, 6; Burke 2013). The U.S. Army has authorized HIV-positive Soldiers who meet the standards of a PEB and are granted host nation clearance to serve in OCONUS assignments (DA 2016, 62). This specific sentence is only found in one U.S. Army regulation, AR 40-501, yet multiple older regulations contradict this guidance. Approval of eligible HIV-positive Soldiers to serve in OCONUS assignments is legally and ethically sound according to the DoD and the limited guidance of the U.S. Army (DA 2016, 62; DoD 2014, 1-11; DoD 2011, 1-41; DoD 2013, 1-8). Additionally, this does not violate the U.S. Army values as each individual’s situation is different and requires a medical recommendation and command approval instead of a blanket policy restricting U.S. Army Soldiers.

As stated during the literature review, by subscribing to a disciplined lifestyle and by taking an ART prescription, Service Members can be stabilized (CDC 2016g; DN

2012, 3,10-11; DoD 2014, 9). This provides options for the U.S. Army to further employ HIV-positive Soldiers while properly accounting for and mitigating risk. This is important since an investment in training has been made (DoD 2014, 7). Finally, OCONUS assignments for HIV-positive Soldiers will provide diverse opportunities for career enhancement and reduce operational tempo as more HIV-positive Soldiers elect to stay in the U.S. Army.

There is always risk involved with every decision but as leaders we must make every effort to mitigate risk to Soldiers, units, the U.S. Army and national security. Currently, U.S. Army regulations do not provide specifics on where HIV-positive Soldiers can serve beyond “Europe and Korea” with host nation approval (DA 2016, 62). AR 600-110, *Identification, Surveillance, and Administration of Personnel Infected with Human Immunodeficiency Virus*, provides strict instructions that HIV-positive Soldiers are not to deploy to combat zones and AR 40-501, *Standards of Medical Fitness*, highlights that HIV-positive Soldiers are not to deploy to combat zones (DA 2014a, 22; DA 2016, 62 ). Currently there is a lack of adequate medical care for HIV-positive Soldiers in Korea but with time this may change (MEDCOM 2017; DA 2014a, 22). Mitigating risk to HIV-positive Soldiers and others is imperative. This can be done by ensuring locations have adequate medical facilities to treat HIV-positive Soldiers and safeguards in place to prevent the possible transmission of HIV in blood donations (MEDCOM 2017; Defense Health Board 2008, 4-8; Burke 2013; DoD 2014, 7). Possible ways to try and reduce risks to Soldiers may include the following.

First, testing Service Members and blood donations are the most realistic option, which requires proper equipment and time (Defense Health Board 2008, 4-8).Guidance

from the U.S. Preventive Services Task Force (USPSTF) on testing intervals for Service Members was updated in 2013, but it is also important to highlight that this policy involves the safety of blood supplies within the U.S. military as well (DoD 2014, 5, 6). Second, in the absence of time, the author questions if having a large enough population to get donations from can reduce the pressure on HIV-positive Soldiers to donate blood in a mass causality situation (Defense Health Board 2008, 4-8; Burke 2013). Third, in the absence of proper medical facilities and equipment throughout Korea and Europe, regulations should detail what locations are adequately resourced to provide HIV medical evaluations and blood testing (Defense Health Board 2008, 4-8; DA 2014a, 22; MEDCOM 2017, DN 2013, 10). Additionally, as of 2017, there are old but standing regulations that are in conflict with new regulations regarding allowing HIV-positive Soldiers to serve in OCONUS assignments. This raises concerns on what guidance Commanders should follow and can cause a distraction legally and ethically to the U.S. Army.

In response to the secondary question, “is the U.S. Army HIV contraction/continued service rate increasing?”, the most recent data on contraction rates is from 2016 and states that historically rates have remained the same (Armed Forces Health Surveillance Branch 2016, 4-8). Based on news reports, there may have been isolated spikes of HIV contractions because of irresponsible sexual behavior facilitated by social media and drug use (Adams 2016; Burbank 2016; Vandiver 2015; Francis 2016). Although, given the limited available data on social trends related to social media and drug abuse, we can identify that there is no identifiable widespread increase of HIV in the U.S. Army (Armed Forces Health Surveillance Branch 2015, 4-5; Armed Forces



Health Surveillance Branch 2016, 4-8; Defense Health Agency 2017). Yet, a U.S. Army medical surveillance report dated September 2016 and U.S. Army HIV information posters did state that from January 2015 through June 2016 there were 120 HIV-positive Soldiers, with 117 being male (Armed Forces Health Surveillance Branch 2016, 4-8; Defense Health Agency 2017). As of 2016, there was a 57 percent increase in retention of HIV-positive Soldiers with a total number of 291 HIV-positive Soldiers actively serving in the U.S. Army (Armed Forces Health Surveillance Branch 2016, 5; Defense Health Agency 2017). There are a number of assumptions as to why more HIV-positive Soldiers are staying in the U.S. Army, which range from repealing the “Don’t Ask, Don’t Tell” policy, medical advancements allowing HIV-positive Soldiers the ability to remain fit for duty, and the cost of HIV treatment and other medical care as a civilian (Brundage, Hunt, and Clark 2015, 9; MHRP 2015).

When analyzing if there are any legal or ethical considerations in reference to the secondary question, “Are there any threats to national security by employing HIV-positive Soldiers in OCONUS assignments?”, the lack of information is significant. As discussed earlier, the availability of blood supplies in remote regions is a concern but based on current regulations and lack of medical resources, HIV-positive Soldiers are not assigned to these locations, but follow up testing maybe needed to ensure a HIV-negative status (Defense Health Board 2008, 4-8; DA 2014a, 22; MEDCOM 2017; Burke 2013). The overall assessment for this portion of the question is unknown due to the lack of publicly available information.

Based upon all these facts and information from U.S. government sources, U.S. military regulations, ongoing conflicts and significant gaps in information, the author has

identified mostly minimal concerns but a few moderate concerns in regards to legal and ethical considerations. There is also a significant gap in information regarding threats to national security because of the lack of publicly releasable information. The moderate concerns include having appropriate medical facilities to treat HIV-positive Soldiers in OCONUS locations, the requirement for HIV-positive Soldiers to be evaluated every six months with an infectious disease physician and the risk of contaminating blood supplies while providing the same standard of care near contested areas in Korea and/or Europe (Defense Health Board 2008, 4-8; DA 2014a, 15, 22; MEDCOM 2017; DoD 2014, 7). These concerns require an overall moderate concern evaluation and hopefully with updated regulations and guidance, the U.S. Army will provide approved descriptive locations/units and de-conflict excessive and/or contradicting U.S. Army regulations (MEDCOM 2017, DoD 2014, 7, 9).

Table 2. Evaluation Criteria: Legal and Ethical Considerations			
Question	Minimal Concern	Moderate Concern	Significant Concern
How has the Infectious Disease Control Center been able to stabilize Service Members with HIV enabling them to serve overseas? Costs? Risks?		X-Medical evaluation, equipment / blood supply in contested areas	
Is the U.S. Army HIV contraction / continued service rate increasing?	X		
Are there any threats to national security by employing HIV-positive Service Members in OCONUS assignments?	Unknown		
<b>Overall Legal and Ethical Considerations</b>		<b>X</b>	

*Source:* Developed by author.

### Step Three: Efficiency of Costs and Resources

Reviewing the secondary questions from an efficiency of costs and resources perspective highlights some concerns. As of 2010, there were 531 U.S. Army active duty Soldiers who were HIV-positive and as of 2015, 318 remained on active duty (Armed Forces Health Surveillance Branch 2015, 4). This was confirmed with a recent update in a U.S. Army medical surveillance report dated September 2016 and U.S. Army HIV information posters. There was a 57 percent retention rate from 2011 thru 2016 with a

total of 291 HIV-positive Soldiers in the U.S. Army (Armed Forces Health Surveillance Branch 2016, 5; Defense Health Agency 2017). These high retention rates illustrate the desire to continue to serve after being diagnosed as HIV positive. Even though these overall numbers seem low, they are still the most out of all the U.S. military services (Armed Forces Health Surveillance Branch 2016, 3-7). Given the statistics on HIV-positive Soldier retention, the author assesses the U.S. Army will continue to see medical costs remain the same and possibly increase as HIV-positive Soldiers continue their military service. This is significant because although ART is a daily pill, it can be very expensive (CDC 2016g; CDC 2017a; DoD 2014, 7).

The cost of ART can range from several hundred dollars to thousands of dollars (AIDSinfo 2016). “The average annual cost of HIV care in the ART era was estimated to be \$19,912 (in 2006 dollars; \$23,000 in 2010 dollars)” (CDC 2017a). Since other medications are bought or sent overseas to treat a number of illnesses, it is assumed there will not be a significant increase in cost to provide ART at an OCONUS assignment, given it is a low maintenance, daily pill (CDC 2016g; CDC 2017a; DoD 2014, 7). Yet, due to the sensitivity of the information, the exact amount the U.S. military spends on ART is not releasable (MEDCOM 2017). The overall costs to ensure medical treatment for HIV-positive Soldiers in OCONUS military medical clinics is also unknown given the sensitivity of the information (MEDCOM 2017). It is assumed by the author that since there is an existing local threat of HIV everywhere, the U.S. Army medical facilities in OCONUS locations (non-combat zones) are equipped and take precautions to avoid being exposed to/or transmitting any infectious diseases. As of 2017, not all U.S. Army

medical facilities are properly equipped and manned with medical professionals to treat HIV-positive Soldiers.

The current U.S. Army locations that have HIV specialty care include: (Walter Reed National Military Medical Center) WRNMMC (Bethesda, MD), (Fort Belvoir Community Hospital) FBCH (Fort Belvoir, VA), (Womack Army Medical Center) WAMC (Ft. Bragg, NC), (Dwight David Eisenhower Army Medical Center) EAMC (Ft. Gordon, GA), (San Antonio Military Medical Center) SAMMC (Ft. Sam Houston, TX), (Carl R. Darnall Army Medical Center) CRDAMC (Ft. Hood, TX; civilian provider only), (William Beaumont Army Medical Center) WBAMC (El Paso, TX), (Madigan Army Medical Center) MAMC (Joint Base Lewis-McChord, WA), (Tripler Army Medical Center) TAMC (Oahu, HI), and (Landstuhl Regional Medical Center) LRMC (Landstuhl, Germany) (MEDCOM 2017).

Currently, Korea is not listed and Service Members would have to travel to the U.S. Naval hospitals in Japan or the U.S. Army medical center in Hawaii for HIV medical evaluations. The requirements to staff a regional medical facility to treat HIV-positive Soldiers requires “staff who are appropriately trained in HIV management/care, to include extensive knowledge of the many antiretroviral treatment options and side effects/drug interaction, as well as various potential opportunistic infections” (MEDCOM 2017). Additionally, the clinic “must have the access to obtain all required laboratory testing for appropriate monitoring of HIV infection” (MEDCOM 2017). The cost of these specialized medical professionals, equipment and facilities to provide proper care to HIV-positive Soldiers is unknown.

Another concern of having Soldiers report to a regional medical facility every six months to be re-evaluated are the significant medical Temporary Duty (TDY) costs (DA 2014a, 15). The U.S. Air Force only requires this evaluation annually (DAF 2014, 6). Additionally, the U.S. Navy sets evaluation timelines as needed by the Service Member’s medical status (DN 2012, 15). The U.S. Navy also lists the following medical facilities

that are capable of providing medical care to HIV-positive Service Members: “Naval Hospital Rota, Spain, Naval Hospital Naples, Italy, Naval Hospital Sigonella, Italy, Naval Hospital Guam, Naval Hospital Yokosuka, Japan, Naval Hospital Okinawa, Japan and finally, the Tripler Army Medical Center / Naval Clinic in Hawaii” (DN 2013, 10). The U.S. Army should reconsider their prescriptive six-month window for evaluations to reduce unnecessary spending of medical TDY travel funds.

Given the U.S. Army HIV-positive population is electing to continue their service and ART is sustaining their medical readiness as being fit for duty, the author assess the U.S. Army will see a gradual increase in spending as the HIV-positive Soldier population grows (Armed Forces Health Surveillance Branch 2016, 5). To counter this cost, the U.S. Army has taken the right steps in treatment to stop the spread of HIV through PrEP, PEP and ART (BAMC 2016; Munson 2017a; DoD 2014, 10). The U.S. Army also employs education, training and external resources focused on facts, treatments and prevention measures to help reduce risky behavior associated with contracting and/or transmitting HIV (DA 2014a, 39-40; MHRP 2015; DoD 2014, 9).

Table 3. Evaluation Criteria: Efficiency of Costs and Resources			
Question	Minimal Concern	Moderate Concern	Significant Concern
How has the Infectious Disease Control Center been able to stabilize Service Members with HIV enabling them to serve overseas?		X-Cost of Med TDY, lack of resources, test blood supply in contested areas	
Is the U.S. Army HIV contraction continued service rate increasing?		X-Continued service – increase of cost / resources	
Are there any threats to national security by employing HIV-positive Service Members in OCONUS assignments?	X		
<b>Overall Efficiency of Costs and Resources</b>		<b>X</b>	

*Source:* Developed by author.

#### Step Four: Effectiveness in Contributing to the Overall U.S. Army Mission

The U.S. Navy and the CDC highlight the overall effectiveness of ART in stabilizing Service Members with minimal medical treatment. Given the fact that HIV “does not pose a risk” to others in the workplace in day-to-day non-combat related work activities this illustrates a minimal concern (DoD 2014, 7; CDC 2016g; DA 2014a, 36). Additionally, as stated in the literature review, the U.S. Army HIV regulation AR 600-

110, *Identification, Surveillance, and Administration of Personnel Infected with Human Immunodeficiency Virus*, states, “nonsexual daily activity” does not pose a risk to others (DA 2014a, 36). Since HIV-positive Soldiers do not pose a risk in non-combat locations and these HIV-positive Soldiers may have specific skill sets and experiences that are extremely valuable in contributing to the overall mission, this signals the need for change to the blanket policy and further clarification. “Revisions to AR 600-110 have been proposed, but a formal revision has not yet been published since the April 2014 update” (MEDCOM 2017). “In the proposed revision, there is a consensus among ID (Infectious Disease) specialists that select OCONUS assignments could be made available to SMs (Service Members) with well-controlled HIV infections if appropriate medical services are available at those specific locations” (MEDCOM 2017). This revision will hopefully provide clarification on what constitutes a combat/contested area in Europe and Korea as weapons systems can reach well past borders and cause mass casualty situations, which raises considerations of risk (Kem 2017; Defense Health Board 2008, 4). Providing this guidance to inform leadership will help mitigate this risk. Finally, the U.S. Army has made an investment in training its personnel and these skills should be employed to their fullest potential at the needs of the Army.

Based upon data from 2015, the HIV contraction rate has decreased since 2010 but it is unknown if any recent trends of risky behavior have influenced contraction rates (Armed Forces Health Surveillance Branch 2015, 4). The U.S. Army medical surveillance report dated September 2016 and U.S. Army HIV information posters inform the public that contraction rates have remained stable, but that from January 2015 thru June 2016 males were predominately affected with 117 out of the 120 HIV-positive



Soldiers being male (Armed Forces Health Surveillance Branch 2016, 4-8; Defense Health Agency 2017). As contraction rates remained relatively the same in 2015 compared to 2014, the percentage of HIV-positive Soldiers electing to stay in the U.S. Army have increased (Armed Forces Health Surveillance Branch 2016, 4-8). This has relatively remained the same as new information from 2011 thru 2016 shows a 57 percent retention rate of HIV-positive Soldiers with an overall count of 291 HIV-positive Soldiers in the U.S. Army (Armed Forces Health Surveillance Branch 2016, 4-8; Defense Health Agency 2017). This highlights minimal concerns as Soldiers who are prescribed ART and are committed to a disciplined lifestyle can continue to positively contribute to the U.S. Army mission and the U.S. Army can capitalize on their investment in training in OCONUS assignments (Brundage, Hunt, and Clark 2015, 9-12, CDC 2016g; CDC 2016b; Armed Forces Health Surveillance Branch 2016, 4-8).

Given the lack of publicly available research data on the U.S. Navy's and the U.S. Air Force's HIV-positive Service Members who may or may not be serving in OCONUS assignments and recent regulation updates in the U.S. Army, it is difficult to assess the effectiveness in contributing to the overall U.S. Army mission. Most of this analysis was based on opinion because of the lack of information as other military services have only recently changed their HIV policies. This is especially true in regards to the secondary question, "are there any threats to national security by employing HIV-positive Service Members in OCONUS assignments?" The lack of information in regards to this question isn't definitive but does highlight that there has not been a compromise of national security or a reversal back to a historic HIV policy from the other two U.S. military services. Additionally, given HIV is found throughout the world, adding a disciplined

Soldier who has their virus under control with the approval of the host nation does not elevate concerns, but more over highlights the importance of healthy life choices, modern medical science and equal opportunity as the U.S. government and military services continue to support and be an example for the rest of the world (U.S. President Emergency Plan and AIDS Relief 2017; CDC 2016b; CDC 2016c; CDC 2016d; CDC 2016f; CDC 2016g).

Table 4. Evaluation Criteria: Effectiveness in Contributing to the Overall U.S. Army Mission			
Question	Minimal Concern	Moderate Concern	Significant Concern
How has the Infectious Disease Control Center been able to stabilize Service Members with HIV enabling them to serve overseas?		X- Defining approved locations and de-confliction of policy	
Is the U.S. Army HIV contraction continued service rate increasing?	X		
Are there any threats to national security by employing HIV-positive Service Members in OCONUS assignments?	Unknown- Lack of information		
<b>Overall: Effectiveness in contributing to the overall U.S. Army mission</b>		<b>X</b>	

*Source:* Developed by author.

### Step Five: Aggregation of Data

An aggregation of the data enables the author to answer the secondary questions in order to draw conclusions for the primary thesis question. In every step, there was at least one moderate concern that raised the overall category to that level. These concerns can be mitigated with updates to regulations, a review of standards, by ensuring medical facilities and medical professionals are available in select OCONUS duty stations for HIV-positive Soldiers, and by resourcing more medical testing equipment to safeguard against accidental contraction/transmission (MEDCOM 2017; Defense Health Board 2008, 4-8).

Protecting forward deployed blood supplies from possible contamination and the disclosure of medical information is a moderate concern for legal and ethical considerations (Defense Health Board 2008, 4-8). To mitigate this requires locations with less hostile threats, rapid testing for blood donations, follow up testing to ensure HIV-negative status and/or a large population of eligible Soldiers who can donate blood which may reduce pressure on HIV-positive Soldiers to donate (Defense Health Board 2008, 4-8; Burke 2013; DA 2014a, 22; DoD 2014, 6).

A moderate concern of efficiency of costs and resources is the current standard of requiring a medical examination every six months (DA 2014a, 15). The standard isn't based upon the individual and may be excessive if the Soldier has control over the virus and has proven they are committed to a disciplined lifestyle (CDC 2016g; CDC 2016c; DoD 2014, 7; CDC 2016b; CDC 2016f). Re-evaluating this requirement based upon the medical needs of the Soldier could also prove a great tool for evaluating if a Soldier is physically capable to serve in an OCONUS assignment (DA 2016, 62; DN 2012, 10, 15).

It is assessed by the author that as the U.S. Army continues to retain HIV-positive Soldiers the cost to treat this population will sustain or gradually increase (Armed Forces Health Surveillance Branch 2016, 5; Defense Health Agency 2017). Additionally, the concern of maintaining equipment to test blood supplies and specialized medical professionals to treat HIV-positive Soldiers in OCONUS locations does increase costs and further research is needed to assess the impact on the U.S. Army in Europe and Korea (Defense Health Board 2008, 4-8; DA 2016, 62). This mitigation will help provide guidance to leaders and HIV-positive Soldiers while reinforcing the U.S. Army to accomplish its mission.

Finally, moderate concerns for contributing to the overall U.S. Army mission are the lack of approved, specific OCONUS locations beyond listing Europe and Korea where HIV-positive Soldiers/dependents may be stationed and/or seek medical care (MEDCOM 2017; DA 2016, 62). Although the research by the author provided more information from an interview with an HIV subject matter expert from MEDCOM, due to U.S. Army culture this information would be best described in an official Army regulation. Concerns also include de-conflicting policy to educate and inform leaders and everyone in the U.S. Army of the policies that involve HIV-positive Soldiers. Educating the U.S. Army should be completed by a ranking commander to subordinate commanders to facilitate awareness of the update in the HIV policy (Kem 2017).

There are some significant unknowns that limit the author in this thesis due to lack of publicly available data. Yet based on the data available, the overall concern for this thesis is moderate with achievable mitigations to reduce the risks to HIV-positive

Soldiers, HIV-negative Soldiers, units, the U.S. Army and the national security of the United States.

<p>Table 5. Evaluation Criteria: Aggregation</p> <p>Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?</p>			
Question	Minimal Concern	Moderate Concern	Significant Concern
Legal and ethical considerations		X- Medical evaluation and equipment / blood supply in contested areas	
Efficiency of costs and resources		X- Cost of Med TDY, lack of resources, retention, test blood supply in contested areas	
Effectiveness in contributing to the overall U.S. Army mission		X- Defining approved locations and de-confliction of policy	
<b>Overall Evaluation</b>		<b>X</b>	

Source: Developed by author.

Additional questions were removed from the secondary questions category because of human subject interview policies and a lack of information. These questions include, “Are HIV-positive Service Members as competitive for promotions given the lack of opportunity for tactical assignments and overseas tours?” and “Do senior Army leaders feel confident in having HIV-positive Service Members in their overseas area of responsibility?” (DoD 2014, 7). For both of these questions there was a significant lack of information and the author was unable to identify any concrete conclusions regarding the U.S. Army. However, the U.S. Navy does clearly state they changed their HIV OCONUS policy because “the previous policy of denying deployments was making this subset of personnel less competitive in achieving career milestones or warrior qualifications” (DoD 2014, 7). An assumption is that the U.S. Army may be similar, but without the data there is no proof. A recent news article from Federal News Radio that pertained to Army promotion boards and retention rates quotes Major General Wilson Shoffner, director of the Army Talent Management Task Force. “The boards are looking for a combination of several different attributes. We are looking to promote leaders of character, who have the right experiences, the right operational experience, who have demonstrated commitment to the profession and also have demonstrated competence in their profession” (Maucione 2016). This quote along with the U.S. Navy confirming their previous policy made HIV-positive Service Members less competitive for promotions identifies a new research topic (DoD 2014, 7). With proper access to promotion rates of HIV-positive Soldiers it would be interesting to identify if the U.S. Army’s policy has had similar effects as the U.S. Navy’s policy, given that more HIV-positive Soldiers are continuing their military service.

### Chapter Summary

The overall answer to the primary research question with moderate concerns is that the U.S. Army should and has begun adapting new conditions in its HIV policy to allow eligible HIV-positive Soldiers to serve in select OCONUS assignments. The conclusions and recommendations based on the aggregation of data from chapter 4 are described by the author in the next chapter. These conclusions answer some of the secondary questions and answer the primary research question. Additionally, recommendations to decision makers based on the overall data in chapter 4 to mitigate concerns are described by the author in chapter 5. Some parts of the secondary questions were simply unanswerable and those gaps have been identified and will be recommended for future research. Other limitations and delimitations of this thesis will also propose future research recommendations. Finally, parting thoughts from the author are in chapter 5 with the intent of answering, “Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?”

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

#### Chapter Introduction

“Should the United States Army adapt new conditions in its HIV policy to allow eligible HIV-positive Soldiers the ability to serve overseas?” Yes, with moderate concerns that require mitigation, the U.S. Army should and has begun adapting new conditions in its HIV policy to allow HIV-positive Soldiers the ability to serve in select overseas assignments. The conclusions to the secondary questions and the overall primary question are in this chapter, which is based upon the research data that was compiled in chapter 4. Additionally, any concerns that were identified will also have recommendations for decision makers on future policy, resources and education for those in the U.S. Army. The author was unable to answer every secondary question and found multiple gaps of information in other secondary questions. Recommendations for future research are described by the author in chapter 5. Finally, parting thoughts regarding the primary research question will conclude this thesis.

#### Conclusions

The conclusions for legal and ethical considerations were found in chapter 4, step two, the legal and ethical considerations. There are some significant conclusions that were found in the literature review and the subject matter expert interview. First, the U.S. Army has proposed to change its HIV policies (MEDCOM 2017; DoD 2014, 11). The U.S. Army does acknowledge medical advancements in HIV treatment for U.S. Army Soldiers and medical professionals in the U.S. Army are in agreement that this treatment



has enabled HIV-positive Soldiers who are eligible and disciplined to serve in select OCONUS assignments pending host nation approval (MEDCOM 2017; DOD 2016, 62). Second, the U.S. Army acknowledges its HIV-positive population has a desire to continue to serve given the high retention rate (Armed Forces Health Surveillance Branch 2016, 5; Brundage, Hunt, and Clark 2015, 9-12). Identifying this trend is important because the U.S. Army needs to ensure equal opportunity for HIV-positive Soldiers and properly resource its investment in training and manpower. Additionally, this proposed policy change is in line with the current DoD policy, reports and is similar to current sister service HIV policies (DN 2013, 1-13; DN 2012, 1-23; DAF 2014, 1-44; DoD 2014, 1-11; DoD 2011, 1-41; DoD 2013, 1-8). Third, the U.S. Army has the capability to treat HIV-positive Soldiers in Germany and based on regulation, once more guidance is provided, Korea will also have HIV treatment medical personnel and medical facilities (MEDCOM 2017; DOD 2016, 62). Although there may be moderate concerns with this policy change regarding on demand blood supplies and contradictory policy, this proposed change in policy is dependent upon a number of stipulations to mitigate risk and reduce these legal and ethical concerns until more guidance or capabilities are provided (Defense Health Board 2008, 4-8; Burke 2013; DoD 2014, 6).

The conclusions for efficiency of costs and resources considerations are taken from chapter 4, step three. Dramatic policy change requires time to implement to ensure risk is properly mitigated to HIV-positive Soldiers, HIV-negative Soldiers, units, the U.S. Army and our national security. Without further guidance in regulations and publicly available information on U.S. Army spending regarding HIV, the majority of these conclusions are opinion based. First, there will be an increase of spending on HIV-

positive Soldiers as retention rates increase despite the fact that contraction rates have either decreased or been stable for a number of years (Armed Forces Health Surveillance Branch 2016, 5; Brundage, Hunt, and Clark 2015, 9-12). This spending will help prevent the virus from spreading and will contribute to future research. Second, the cost to establish HIV treatment centers in OCONUS assignments will increase spending in terms of specialized medical personnel and equipment (MEDCOM 2017; Defense Health Board 2008, 4-8). Currently, there is only one U.S. Army OCONUS assignment in Germany that is properly resourced to treat HIV-positive Soldiers, although Korea is mentioned in AR 40-501 (MEDCOM 2017). The ability to treat HIV-positive Soldiers requires specialized medical personnel and facilities to properly take care of and evaluate HIV-positive Soldiers in OCONUS assignments every six months (DA 2014a, 15; MEDCOM 2017). Third, medical TDY costs may increase given the limited OCONUS locations capable of providing treatment and the requirement that HIV-positive Soldiers are evaluated every six months (DA 2014a, 15). Fourth, mitigating risk to blood supplies is imperative in locations where HIV-positive Soldiers are serving (Defense Health Board 2008, 4-8; Burke 2013). All of these concerns maybe be mitigated with time, resources and systems to reduce risk to HIV-positive Soldiers and others in the U.S. Army.

The conclusions for the effectiveness in contributing to the overall U.S. Army mission are taken from chapter 4, step four. The majority of these conclusions are based on opinion because of the lack of information available to the public. First, given the U.S. Army has the largest population of HIV-positive Service Members out of all services and the retention rates have dramatically increased, it is wise to seek ways to employ this population to its fullest potential (Armed Forces Health Surveillance Branch 2016, 2-7;

Defense Health Agency 2017; Brundage, Hunt, and Clark 2015, 9-12). Second, since there is an existing medical treatment capability overseas in Germany where dependents are being treated this should open the opportunity for eligible HIV-positive Soldiers (MEDCOM 2017; DA 2014a, 35). Third, because of the lack of information from other U.S. military services on their existing HIV-positive Service Members who may or may not be serving in OCONUS assignments, it is unknown if there are any risks to national security. Yet, the lack of information on this topic also drives a point that if there are any concerns they may be minimal. Fourth, the lack of updated policies and contradictory policies for the U.S. Army is a significant concern as leaders lack up-to-date information and guidance in regulations to make leadership decisions.

Some of these conclusions that involve concerns will take time to mitigate as policies are reviewed/updated, regional medical facilities are properly resourced and further research is conducted to provide adequate guidance and manpower to the leaders of the U.S. Army (MEDCOM 2017). However, the overall conclusion to the primary research question is that the U.S. Army should and has begun revising its HIV policies to allow eligible HIV-positive Soldiers to serve in select OCONUS assignments.

#### Recommendations for Decision Makers

There are a number of recommendations to mitigate concerns regarding legal and ethical considerations, but the primary recommendation is to publish a revision of AR 600-110 and amend other regulations to support the U.S. Army medical professionals' consensus of allowing eligible HIV-positive Soldiers the ability to serve in OCONUS assignments (MEDCOM 2017; DoD 2014 7,11). This revision should also include as much information as possible on specific standards of eligibility, specific locations that

can provide proper medical treatment, and identify OCONUS locations that do not pose unnecessary risks to the Soldier or others. Additionally, a reassessment of the medical policy enforcing medical evaluation every six months may be in order to gauge its necessity for those, who are determined by a PEB, eligible for OCONUS assignments (DA 2014a, 15, 22; DA 2016, 62). A reference for standards should start with existing programs found in the U.S. Navy and built upon as seen fit for the U.S. Army (DN 2012, 1-23; DN 2013, 1-13).

Recommendations to mitigate concerns regarding efficiency in costs and resources considerations include collaboration and review of standards. Continued collaboration with sister services on their policies and locations where HIV treatment is available will provide more options to the U.S. Army and flexibility for the U.S. military (DN 2013, 10; MEDCOM 2017). This flexibility will maximize manning and provide the ability for HIV-positive Service Members to be employed beyond the limitation of their specific service. A review of standards will also reduce spending on medical travel and medical evaluations for HIV-positive Soldiers who have been determined by a PEB to be eligible for OCONUS assignments (DA 2016, 62; DA 2014a, 15).

Recommendations to mitigate concerns regarding effectiveness in contributing to the overall U.S. Army mission include a revision of the HIV policy on OCONUS assignments and adding this change to annual training requirements to ensure leaders are informed (MEDCOM 2017). Other recommendations include championing HIV-positive Soldiers who have proven themselves in controlling their virus and achieved the eligibility to serve in an OCONUS assignment. As well as assigning eligible HIV-positive Soldiers to Germany with options to extend if they maintain their eligibility.

Finally, as stated in costs and resources, as the HIV-positive population grows with increased retention rates, employing eligible Soldiers to their fullest potential should be the ultimate goal of the U.S. Army in an effort to gain the most from the initial and continued training invested in the Soldier (Brundage, Hunt, and Clark 2015, 9-12; Armed Forces Health Surveillance Branch 2016, 5; Defense Health Agency 2017; DoD 2014, 7).

### Recommendations for Future Research

The limitations and delimitations for this thesis are the foundation for recommendations for future research and identifies specific gaps in information that could have provided more understanding to this overall thesis.

First, there may be a great opportunity for the U.S. Air Force and U.S. Navy to conduct research on HIV-positive Service Members who may or may not be serving in OCONUS assignments. This research would be fundamental in answering questions that have restricted HIV-positive Service Members in the past. Second, this thesis was centered around an HIV policy limiting OCONUS assignments, yet there are other restrictions that limit or prevent HIV-positive Soldiers from serving in specific MOSs, specialty assignments and training opportunities that need to be researched to ensure existing policies are adequate based on current medical treatments and U.S. Army requirements (DA 2014a, 22-24; DoD 2014, 9). Research similar to the *Neurocognitive Impairment (NCI) in Early Diagnosed and Managed HIV-Infected Persons* study, which provided awareness and education on specific topics needs to be conducted. This study identified low rates of NCI in those who are diagnosed early and successfully manage their HIV (Crum-Cianflone et al. 2013). Finally, it's recommended that future research be

conducted on policies regarding other blood-borne viruses that are similar to HIV to assess if medical treatment and existing policy are complementary to each other.

There were additional secondary questions that were dropped from this thesis because of the lack of publicly available data and draft human research regulations. These questions involved promotion rates of HIV-positive Soldiers and if senior leaders feel confident allowing HIV-positive Soldiers to serve in OCONUS assignments (DoD 2014, 7). Provided the appropriate access to conduct the required research, these questions would dive into uncharted discussion and opinions.

There are significant gaps in information regarding legal and ethical considerations involving the social trends of contracting HIV. Multiple news articles made claims of risky sexual behavior being enabled through social media and drug use (Adams 2016; Burbank 2016; Vandiver 2015; Francis 2016). Yet, there was a lack of updated U.S. Army wide data to verify a trend. Additionally, data showed a decrease or stabilization of HIV contractions over the years amongst the active U.S. Army (Armed Forces Health Surveillance Branch 2016, 4-8). Updated research on recent social trends that led to HIV contraction would greatly help U.S. Army leaders understand the threats their formations face and who is most at risk (MHRP 2015; IDCPR 2017).

One significant gap in information regarding efficiency of costs and resources centered around privileged information regarding what the U.S. Army spends on HIV treatment (MEDCOM 2017). Since this information was not publicly releasable this made it difficult to assess the overall impact as the CDC and other resources provided general cost information (MEDCOM 2017). A review of historical costs to receive HIV treatment from U.S. military medical programs would provide more detailed information.

There were significant gaps in information about contributing to the overall U.S. Army mission regarding threats to national security. Given the sensitivity of this topic, naturally this information is not available to the public. Yet, the topic of blood supplies was a great concern, specifically in contested areas where mass casualty situations could deplete blood supplies quickly (Defense Health Board 2008, 4-8, Burke 2013; DoD 2014, 6). A new study should be conducted on this topic as the most up-to-date information available to the public was dated 2008.

### Parting Thoughts

In reference to other recent policy changes in the U.S. military, the Secretary of Defense Ash Carter quoted the Chief of Staff of the Army GEN Mark Milley:

The United States Army is open to all Americans who meet the standard, regardless of who they are. Embedded within our Constitution is that very principle, that all Americans are free and equal. And we as an Army are sworn to protect and defend that very principle. And we are sworn to even die for that principle. So, if we in uniform are willing to die for that principle, then we in uniform should be willing to live by that principle. (Carter 2016)

This quote goes hand-in-hand with HIV-positive Soldiers. If they meet the standard, are fit for duty, and have approval from the host nation, they too should be able to serve in OCONUS assignments.

## APPENDIX A

### POSSIBLE EXPOSURE STANDARD PROCEDURES

1. Wash wound and skin sites that have been in contact with blood and/or body fluids with soap and water; flush mucous membranes with water.
2. Author's Note: This initial guidance does not apply to victims of sexual assault. Victims of sexual assault should immediately seek emergency medical care.
3. Report to supervisor immediately
4. Report to (the) Occupational Health Nurse to begin exposure processing. If (the) Occupational Health Nurse is unavailable, report immediately to Internal Medicine.
5. (The) Occupational Health Nurse completes Appendix 19A and obtains a signed permit from the source for appropriate blood draw.
6. (If available) Laboratory (should) collect blood samples from both the exposed and the source of the exposure.
7. In the event of an exposure after duty hours and the source is known to be HIV positive, (the) exposed should be immediately direct to the nearest emergency department for post-exposure prophylaxis.

If the source is unknown or has a(n) unknown HIV status, post-exposure prophylaxis is started with Truvada (Tenofovir DF (Viread, TDF) 300 mg plus emtricitabine (Emtriva; FTC) 200mg by mouth once daily. Additionally, Isentress (Raltegravir (RAL) 400 mg by mouth twice daily. If the source is known with an unknown HIV status, the exposed individual should receive a one week supply of the post exposure prophylaxis



regimen. If the source HIV antibody test is negative, then the post exposure prophylaxis regimen may be discontinued in the exposed individual. If the HIV antibody test is positive with the source, then the exposed individual should continue the post exposure prophylaxis regimen for an additional three weeks to make a total treatment regimen of four weeks. The exposed individual should then return to the lab at six weeks, 12 weeks and six months after the exposure occurred for a repeat HIV antibody testing. If the repeat HIV antibody testing done after exposure is negative, no further evaluation is needed. If any HIV antibody testing done after exposure is positive, the exposed individual should be referred to an infectious disease physician for further evaluation and treatment (Munson 2017a).

If the source is unknown, the exposed individual should be sent to the laboratory as soon as possible to have an HIV antibody test performed. The exposed individual should be started on a four-week post exposure prophylaxis regimen as soon as possible. The exposed individual should then return to the lab at six weeks, 12 weeks and six months after the exposure occurred for a repeat HIV antibody testing. If all repeat HIV antibody testing done after exposure is negative, no further evaluation is needed. If any HIV antibody testing done after exposure is positive, the exposed individual should be referred to an infectious disease physician for further evaluation and treatment (Munson 2017a).

## APPENDIX B

### NOTIFICATION PROCESS

A. Installation human immunodeficiency virus program coordinator (PHN or designee).  
The PHN—

- (1) Receives results from the clinical laboratory manager identifying new HIV infections.
  - (a) AD Soldiers are managed by the HIV program coordinator (PHN).
  - (b) Reserve and Guard Soldiers are referred to the appropriate Reserve or Guard HIV POC.
  - (c) AGR Soldiers are referred to the appropriate Reserve or Guard HIV POC and jointly managed with active HIV PHN.
  - (d) AD Navy, Marine Corps, Coast Guard, and Air Force Service members are referred to the appropriate Service HIV POC.
  - (e) Retirees and Family members are referred to the servicing MEDCEN infectious disease service after a face-to-face notification of the initial and verification HIV positive test results. The notification procedures are the same as an AD Service member except commanders are not informed. The confidential epidemiological assessment is completed by the HIV PHN or referred to local public health officials.
- (2) Informs the ordering provider of a new positive HIV test result if performed for clinical reasons, and the need for a face-to-face notification, second verification test, and referral to the servicing MEDCEN infectious disease service. If the test was performed for routine screening (medical readiness force testing, physical exam), inform the HIV program director.
- (3) Confirms the identities of the commander and the Soldier with two unique identifiers before the commander is notified of the positive test result.
- (4) Provides training on this regulation for the commander before initial commander's counseling.
- (5) Coordinates notification of the Soldier, in a face-to-face encounter, of new positive HIV test result by the ordering provider or HIV program director, and obtains a second verification test.

- (6) Coordinates the DA Form 5669 after notification of the (first) positive HIV test.
- (7) Coordinates completion of the commander's counseling (DA Form 4856) on the same day and immediately following the DA Form 5669 counseling.
- (8) Contacts installation HRC HIV POC and central AC or RC HRC HIV POC for assignment-limiting actions. Note. For Reserve and Guard assignment-limiting actions see chap 7. Sends memorandum with following information to central AC or RC HRC HIV POC by encrypted email or confidential fax:
- (a) Subject: Medically Nondeployable.
  - (b) Reference: AR 40–501, Standards of Medical Fitness.
  - (c) Statement: For Official Use Only (FOUO) in accordance with the above reference, (person's rank, name, and last four digits of the social security number) is assessed as medically nondeployable effective (date of the first positive HIV test).
  - (d) Statement: Further information is available upon request. POC is (name, phone, and DOD email address of the HIV PHN).
  - (e) Signature block: HIV program director.
- (9) Coordinates appointments for the initial medical evaluation with the servicing MEDCEN infectious disease service after notification of the (first) positive test.
- (10) Coordinates a psychosocial evaluation and behavioral health appointment(s) following the initial notification or during the first infectious disease clinic medical evaluation visit and, as needed, for depression screening and suicide prevention.
- (11) Provides HIV counseling and education, including community resources.
- (12) Assesses for latent tuberculosis infection and counsels those who have opted out of latent tuberculosis infection treatment in the past to reconsider given their increased risk of active disease.
- (13) Conducts initial confidential epidemiological assessment for the period from 3 months prior to last negative HIV test or 12 months in absence of a prior test to notification of the first positive test, and completes contact interview(s) in accordance with the Centers for Disease Control and Prevention (CDC)

guidelines. Additional epidemiology assessment may be needed for public health purposes.

(14) Completes Federal, State, local, or host nation public health reporting.

(15) Locates, notifies, and counsels all military HCBs named as contacts of the HIV infected Soldier. If named contacts reside outside the catchment area, contacts the appropriate military HIV program coordinator (PHN) or other appropriate public health officials for notification and testing of contacts.

(16) Reviews Soldier responsibilities as reflected in the preventive medicine counseling (DA Form 5669) and commander's counseling (DA Form 4856) statements.

(17) Completes DA Form 7303 (Donor/Recipient History Interview) during the contact interview and submits to the local Army Blood Donor Center or, if there is no donor center on the installation, submits the completed form to the MTF's laboratory manager who, in turn, will submit it to the Army Blood Program Office (see fig 2-1 for a sample of completed DA Form 7303).

(18) Assures HIV infected Soldier's Medical Protection System (MEDPROS) documentation reflects a profile deployment restriction code (V) and medical nondeployment module "Yes" following notification of the confirmatory test from the first specimen. Coordinates periodic health assessment (PHA) at diagnosis and annually for AC, as required.

(19) Maintains, in a locked cabinet, a registry of all known HIV infected Soldiers within the catchment area per OTSG preventive medicine policy and in accordance with HIPAA, and maintains a duplicate file that includes DA Forms 5669, 4856, and 7303, public health forms, and demographic data. DA Forms 5669 and 4856 will not be scanned into the electronic medical record. Upon PCS, the duplicate file contents are sent to the gaining HIV program coordinator (PHN). Upon the expiration term of service or retirement, the duplicate file will be destroyed.

(20) Meets with the HIV infected Soldier annually to complete a new DA Form 5669, update demographics, review safer sex counseling, and coordinate medical readiness. If the Soldier has not completed a medical evaluation every 6 months with the infectious disease physician he or she is out of compliance with this regulation, prompting commander notification.

(21) Coordinates Soldier transfer out of catchment area within 30 days of PCS to a new duty station and sends preventive medicine and commander's counseling

statements encrypted or by confidential fax to gaining HIV program coordinator (PHN).

(22) Receives Soldier transfer into catchment area within 30 days of Soldier PCS, reviews Soldier responsibilities, updates the preventive medicine counseling, coordinates commander's counseling, provides infectious disease clinic appointment information, coordinates medical readiness PHA, completes local health department reporting, and provides community resources.

(23) Coordinates HIV education programs for health care workers and unit-level training, as requested.

(24) Reviews HIV test results with MTF or MEDCEN laboratory HIV POC daily to weekly if not performed by the HIV program director.

B. Notifying individual. This is the ordering provider in a face-to-face appointment. For all other situations, this is a preventive medicine physician or other trained health care provider (skill level 2 or licensed independent provider). The notifying individual—

(1) Completes a psychosocial assessment and, as needed, referral to behavioral health.

(2) For Army medical and infectious disease staff, informs the MTF preventive medicine HIV director or coordinator (PHN) of AD Navy, Marine Corps, Coast Guard, and Air Force Service members with a suspected or confirmed HIV infection.

d. Medical evaluation. This is completed by the regional MEDCEN infectious disease clinic after positive HIV verification. Initial appointments are scheduled by the HIV PHN. This includes—

(1) Conduction a medical reevaluation every 6 months and as directed by the infectious disease physician.

(2) Documenting safer sex education and nondeployable status in medical assessments.

(3) Ensuring HIV PHN is aware of known HIV positive Soldiers and beneficiaries, to include knowledge of impending PCS.

(4) Advising UCMJ commander of noncompliance with medical management of HIV infection pursuant to involuntary separation (see paras 6–13 and 6–14). e.

Psychosocial evaluation. This is completed by behavioral health or infectious disease clinic social work or psychiatry staff. This includes—

- a. Documenting evaluation in the electronic medical record.
- b. For communities with limited resources, pastoral care and chaplains providing support until medical evaluation appointments at the regional MEDCEN. f. Clinical laboratory manager or blood bank officer. This function will—
  - (1) Coordinate obtaining unit-level and individual blood specimens for testing required by this regulation and other references.
  - (2) Maintain data concerning force testing and clinical screening, including the number of specimens drawn, the number submitted, results of initial testing, and results of confirmatory testing.
  - (3) Ensure compliance with guidelines for obtaining, processing, labeling, packaging, shipping, and storing specimens.
  - (4) Serve as local POC for matters pertaining to contracted laboratory support.
  - (5) Initiate look back investigation on any previous blood donations (DA 2014a, 6-8)

## APPENDIX C

### COMMANDERS' COUNSELING

a. Commanders will formally counsel Soldiers face-to-face after notification of their (first) positive HIV test and completion of the DA Form 5669. For AD and RC personnel, command counseling will be performed after the preventive medicine counseling. Commanders will use DA Form 4856, maintain the completed counseling forms in a locked filing cabinet or other storage unit to protect the confidentiality of the information, and provide a copy to the HIV PHN.

(1) When the commander counsels the HIV exposed Soldier, the following should be entered verbatim on DA Form 4856 in part III—Summary of Counseling (see [http://www.armyg1.army.mil/hr/hivdna/ref\\_hiv.asp](http://www.armyg1.army.mil/hr/hivdna/ref_hiv.asp) for a word document of the content):

I have been advised that you were counseled by the preventive medicine personnel concerning your positive HIV test, the risk HIV infection poses to your health, and the potential for transmitting HIV to others. You were advised by the preventive medicine personnel of the necessary precautions you must take to minimize the health risk to others as a result of your HIV infection. While I have great concern for your situation, in my capacity as your commander I must also be concerned with, and ensure the health, welfare, and morale of the other Soldiers in my command. Therefore, I am imposing the following restrictions:

- (a) You will verbally advise all prospective sexual partners of your HIV infection prior to engaging in any sexual activity. You are ordered to use condoms should you engage in oral, vaginal, penile, or anal sexual activity with a partner.
- (b) You will not donate blood/blood products, sperm/semen or eggs, breast milk, tissues, and organs, and will report previous donations to the HIV PHN.
- (c) You will notify medical, dental, and emergency health care workers of your HIV infection.
- (d) You will comply with the medical management of HIV infection directed by your infectious disease physician, to include medical evaluations every 6 months and as needed.
- (e) You are nondeployable and may not go TDY OCONUS. (f) You will obtain a PHA facilitated by the HIV PHN as soon as possible and annually. (g) You will out-process and in-process with your preventive medicine HIV PHN as part of every PCS move.

(2) The following should be entered verbatim on DA Form 4856 in part III—Plan of Action (see [http://www.armyg1.army.mil/hr/hivdna/ref\\_hiv.asp](http://www.armyg1.army.mil/hr/hivdna/ref_hiv.asp) for a word document of the content):

(a) Cooperate fully with my HIV program coordinator to confidentially reveal the identity of all persons with whom I have had sex or shared needles for the period starting 3 months prior to my last negative HIV test so contacts may receive counseling and testing to break the chain of transmission. In addition to revealing their identities, I will personally inform my contacts, including my spouse, and recommend they seek medical consultation.

(b) Understand my status is nondeployable and I may not go TDY OCONUS.

(c) Do not donate blood/blood products, sperm/semen or eggs, breast milk, tissues, or organs.

(d) Follow my UCMJ commander's order by informing all potential sexual partners of my HIV positive status before engaging in intimate sexual contact. My partner will not be under the influence of alcohol, drugs, or prescription medications that could potentially alter his or her judgment during this discussion.

(e) Practice safer sex using a condom or other barrier method recommended by the CDC with every vaginal, penile, anal, and oral sexual encounter. Safer sex practice will not only protect my partners but will also protect me from exposure to other drug-resistant HIV strains.

(f) Notify medical, dental, and emergency health care workers of my HIV infection by stating, "I am blood donor ineligible" or "I have HIV."

(g) Schedule and attend infectious disease clinic appointments every 6 months and more often, as directed by my infectious disease clinic physician.

Note. ARNG and Reserve Soldiers, unless activated, will have annual fit for duty (FFD) medical evaluations.

(h) Complete DA Form 5669 at diagnosis and annually with my HIV PHN.

(i) Complete the DA Form 4856 at diagnosis, within 30 days of a unit change of command, and within 30 days of every PCS move.

(j) Complete a PHA at diagnosis and annually as coordinated by my HIV PHN.



- (k) Contact my current HIV PHN 1 month before PCS for coordination of medical appointments and command requirements with the gaining HIV PHN and in-process with my new HIV PHN at expiration term of service or retirement.
  - (l) Report all previous donations of blood/blood products, sperm/semen or eggs, breast milk, tissues, or organs to my HIV Program coordinator (PHN).
  - (m) Understand the health risk and will avoid live attenuated viral immunizations such as intranasal influenza, chicken pox, smallpox, measles, mumps, rubella, yellow fever, and oral typhoid.
- b. The commander's copies of the DA Form 5669 and the DA Form 4856 will be maintained in a locked cabinet or storage unit and designated as "Eyes Only" for the commanding officer as long as the Soldier is assigned to that unit. The commanding officer, in situations of Soldier noncompliance, may disclose this information to designated unit senior leadership on a case-by-case basis to support the Soldier toward compliance. For Soldiers PCSing, the HIV PHN will transfer DA Form 5669 and DA Form 4856 by confidential mail or scanned encrypted email to the gaining HIV PHN. The new HIV PHN will complete a new DA Form 5669 and coordinate with the new unit commander to complete DA Form 4856. For unit commanders PCSing, a commander's copy of DA Form 5669 and DA Form 4856 will be provided to the new unit commander and a new DA Form 4856 will be completed (DA 2014a, 15-16).

## APPENDIX D

### STRUCTURED INTERVIEW WITH A MEDCOM HIV SUBJECT MATTER EXPERT

1. Has there been any recent studies on service member contraction rates and the lifestyles behind them in the last two years?

Response: The DoD's data on new HIV diagnoses in the US military services is regularly published in the MSMR - I have attached the most recent one for your review. You can see that HIV rates in the US military are much lower than in the civilian community, for reasons indicated in the paper.

There have been no specific studies looking at lifestyle behaviors specifically among military service members. However, as seen in the above MSMR report, most cases of infection continue to occur in males and, similarly to what is depicted in the CDC's HIV prevalence data, in the MSM population.

Source: <https://www.cdc.gov/hiv/basics/statistics.html>

2. Has there been any studies on U.S. Army Soldiers serving in OCONUS assignments?

Response: No. Revisions to AR 600-110 have been proposed, but a formal revision has not yet been published since the April 2014 update. In the proposed revision, there is a consensus among ID specialists that select OCONUS assignments could be made available to SMs with well-controlled HIV infection if appropriate medical services are available at those specific locations.

3. Where are the locations of clinics that provide HIV treatment? What makes a clinic capable/certified to treat HIV Soldiers?

Response: The current US Army locations that have HIV specialty care include: WRNMMC (Bethesda, MD), FBCH (Fort Belvoir, VA), WAMC (Ft. Bragg, NC), EAMC (Ft. Gordon, GA), SAMMC (Ft. Sam Houston, TX), CRDAMC (Ft. Hood, TX; civilian provider only), WBAMC (El Paso, TX), MAMC (Joint Base Lewis-McChord, WA), TAMC (Oahu, HI), and LRMC (Landstuhl, Germany).

Response: To be able to treat HIV-infected individuals, clinics must have staff who are appropriately trained in HIV management/care, to include extensive knowledge of the many antiretroviral treatment options and their side effects/drug interactions, as well as various potential opportunistic infections. In the DoD, Infectious Diseases is the only specialty trained in management of HIV infection. An HIV clinic also must have the ability to obtain all required laboratory testing for appropriate monitoring of HIV infection, to include access to HIV viral load and CD4 cell count testing, as well as 3-site chlamydia/gonorrhea testing.

4. Have there been any studies related to the cost of treating HIV service members?

Response: 2010 civilian estimates for annual and lifetime costs of treating HIV cases have been previously used and the cost of HIV care in the military was validated as of 2009, but no recent assessments have been made since several new antiretrovirals have been FDA-approved for HIV treatment. The DoD's actual antiretroviral treatment costs cannot be made public so information from DoD-specific studies is restricted from release. Most recent civilian estimates are based on CDC data: "The average annual cost of HIV care in the ART era was estimated to be \$19,912 (in 2006 dollars; \$23,000 in 2010 dollars). The most recent published estimate of lifetime HIV treatment costs was \$367,134 (in 2009 dollars; \$379,668 in 2010 dollars)."

Source:

<https://www.cdc.gov/hiv/programresources/guidance/costeffectiveness/index.html>

5. AR 600-110 states HIV positive soldiers will not be stationed OCONUS, yet AR 40-501 states "if found fit by a PEB, Soldiers may deploy to Europe or Korea (host Nation permitting)". Is there intent to change AR 600-110 and adapt considerations from the Air Force and Navy HIV policies?

See response to question 2 above.

6. AR 600-110 allows HIV dependents to be stationed overseas. Have HIV-positive dependents stationed overseas? (intent is for a yes or no response?)

Response: There are no restrictions to HIV infected dependents co-locating overseas with their active duty spouses. Yes, dependents of active duty SMs are currently being followed at our only OCONUS facility where HIV specialists are embedded – LRMC (MEDCOM 2017).

## REFERENCE LIST

- Adams, Eric. 2012. "HIV Outbreak on Alaska Army Base Rattles Public Health Officials." ADN.com. Updated 27 September 2016. Accessed 28 February 2017. <https://www.adn.com/alaska-news/article/hiv-outbreak-alaska-army-base-rattles-public-health-officials/2012/02/22/>.
- Agan, Brian K. 2009. "U.S. Military (DoD) HIV Natural History Study Cohort." HIV Forum. 8 December. Accessed 17 November 2016. <http://www.hivforum.org/storage/documents/Cohorts/dod%20hiv%20nhs.pdf>.
- AIDSinfo. 2016. "Guidelines for the Use of Antiretroviral Agents in HIV-1 Infected Adults and Adolescents." 14 July. Accessed 28 February 2017. <https://aidsinfo.nih.gov/guidelines/html/1/adult-and-adolescent-arv-guidelines/459/cost-considerations-and-antiretroviral-therapy>.
- Armed Forces Health Surveillance Branch. 2015. "Update: Routine Screening for Antibodies to HIV Civilian Applicants for U.S. Military Service and U.S. Armed Forces, Active and Reserve Components January 2010-June 2015." *Medical Surveillance Monthly Report* 22, no. 8 (August): 2-8. Accessed 8 April 2017. <http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA623208>.
- . 2016. "Update: Routine Screening for Antibodies to Human Immunodeficiency Virus, Civilian Applicants for U.S. Military Service and U.S. Armed Forces, Active and Reserve Components, January 2011-June 2016". *Medical Surveillance Monthly Report*. 23, no. 9 (September): 2-8. Accessed 18 April 2017. <https://health.mil/Military-Health-Topics/Health-Readiness/Armed-Forces-Health-Surveillance-Branch/Reports-and-Publications/Medical-Surveillance-Monthly-Report>.
- Brooke Army Medical Center (BAMC). 2016. "Brooke Army Medical Center Research Program History." Disease Clinical Research Program, University of Texas Health Science Center and Walter Reed Army Institute of Research. U.S. Army Medical Department, 28 March 2016. Accessed 17 November 2016. <https://www.bamc.amedd.army.mil/staff/research/hiv/research.asp#Publications>.
- Brundage John F., Devin J. Hunt, and Leslie L. Clark. 2015. "Durations of Military Service after Diagnoses of HIV-1 Infections among Active Members of the U.S. Armed Forces, 1900-2013." *Medical Surveillance Monthly Report* 22, no. 8 (August): 9-12. Accessed 18 April 2017. <http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA623208>.

- Burbank, Whitney. 2016. "Fort Bliss Leads Army Installations with Most HIV Infections in Past Two Years." KVIA.com, 24 August. Accessed 2 November 2016. <http://www.kvia.com/news/fort-bliss-leads-army-installations-with-most-hiv-infections-in-past-two-years/55717302>.
- Burke Mathew M. 2013. "No Postings Yet for HIV-Positive Marines, Sailors since Policy Change." *Stars and Stripes*, May 23. Accessed 2 November 2016. <http://www.stripes.com/news/us/no-postingsyet-for-hiv-positive-marines-sailors-since-policy-change-1.222048>.
- Carter, Ashton. 2016. "Secretary Ashton Carter on Defense Department Transgender Policy." C-SPAN Video. Quoting GEN Milley, 4:44 thru 5:15. 30 June. Accessed 8 April 2017. <https://www.c-span.org/video/?412040-1/defense-secretary-ashton-carter-lifts-ban-transgender-service-members>.
- Centers for Disease Control and Prevention (CDC). 2016a. "Basic Statistics." 30 November. Accessed 12 April 2017. <https://www.cdc.gov/hiv/basics/statistics.html>.
- . 2016b. "Living Abroad with HIV." 24 August. Accessed 6 April 2017. <https://www.cdc.gov/hiv/basics/livingwithhiv/travel.html>.
- . 2016c. "Opportunistic Infections." 25 November. Accessed 30 November 2016. <https://www.cdc.gov/hiv/basics/livingwithhiv/opportunisticinfections.html>.
- . 2016d. "PEP." 12 July. Accessed 30 November 2016. <https://www.cdc.gov/hiv/basics/pep.html>.
- . 2016e. "PrEP." 12 July. Accessed 30 November 2016. <https://www.cdc.gov/hiv/basics/prep.html>.
- . 2016f. "Transmission." 21 December. Accessed 6 April 2017. <https://www.cdc.gov/hiv/basics/transmission.html>.
- . 2016g. "Treatment." 12 January. Accessed 26 March 2017. <https://www.cdc.gov/actagainstaids/campaigns/hivtreatmentworks/stayincare/treatment.html>.
- . 2017a. "HIV Cost-Effectiveness." 8 March. Accessed 12 April 2017. <https://www.cdc.gov/hiv/programresources/guidance/costeffectiveness/index.html>.
- . 2017b. "What is HIV?" 10 April 2017. Accessed 21 April 2017. <https://www.cdc.gov/hiv/basics/whatishiv.html/>.

- Crum-Cianflone, Nancy. F., David J. Moore, Scott. Letendre, Mollie Poehlman. Roediger, Lynn Eberly, Amy Weintrob, Anuradha Ganesan, Erica Johnson, Rachel Del Rosario, Brian K. Agan, and Braden R. Hale. 2013. "Low Prevalence of Neurocognitive Impairment in Early Diagnosed and Managed HIV-Infected Persons." Research Study, 22 January, Accessed 20 April 2017. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3589242/>.
- Department of the Air Force (DAF). 2014. Air Force Instruction 44-178, *Air Force Human Immunodeficiency Virus Program*. Washington, DC: Government Printing Office, 4 March. Accessed 3 November. 2016. [http://static.e-publishing.af.mil/production/1/af\\_sg/publication/afi44178/afi44-178.pdf](http://static.e-publishing.af.mil/production/1/af_sg/publication/afi44178/afi44-178.pdf).
- Department of the Army (DA). 2006. Army Regulation (AR) 635-40, *Physical Evaluation for Retention, Retirement, or Separation*. Washington, DC: Government Printing Office.
- . 2014a. Army Regulation (AR) 600-110, *Identification Surveillance, and Administration of Personnel Infected with Human Immunodeficiency Virus*. Washington DC. Government Printing Office.
- . 2014b. Army Regulation (AR) 40-400, *Patient Administration*. Washington DC. Government Printing Office.
- . 2015. Draft Army Regulation (AR) 70-25. *Protection of Human Subjects*. Washington DC. Government Printing Office.
- . 2016. Army Regulation (AR) 40-501, *Standards of Medical Fitness*. Washington DC. Government Printing Office.
- Department of Defense (DoD). 2010. Department of Defense Instruction (DoDI) 6490.07, *Deployment-Limiting Medical Conditions for Service Members and DoD Civilian Employees*. Washington, DC: Government Printing Office, 5 February. 1-14. Accessed 22 April 2017. <http://www.dtic.mil/whs/directives/corres/pdf/649007p.pdf>.
- . 2011. Department of Defense Instruction (DoDI) 6490.03, *Deployment Health*. Washington, DC: Government Printing Office, 30 September. 1-41. Accessed 22 April 2017. <http://www.dtic.mil/whs/directives/corres/pdf/649003p.pdf>.
- . 2013. Department of Defense Instruction (DoDI) 6485.01, *Human Immunodeficiency Virus in Military Service Members*. 7 June. 1-8. Accessed 22 April 2017. <http://www.dtic.mil/whs/directives/corres/pdf/648501p.pdf>.
- . 2014. *Report to Congressional Defense Committees on Department of Defense Personnel Policies Regarding Members of the Armed Forces with HIV or Hepatitis B*. Washington, DC: Government Printing Office, 22 September. Accessed 3 November 2016. <https://health.mil/ReferenceCenter/Reports/>

- 2014/09/22/DoD-Personnel-Policies-Regarding-Members-of-the-Armed-Forces-with-HIV-or-Hepatitis-B.
- Defense Health Agency. 2017. “Routine Screening for Antibodies to HIV among Male Civilian Applicants.” Health.mil. January 2011–June 2016 Information Poster. 24 March. Accessed 8 April 2017. <https://health.mil/News/Gallery/Infographics/2017/03/24/Routine-Screening-for-HIV-Antibodies-Among-Male-Civilian-Applicants>.
- Defense Health Board. 2008. “Recommendations Regarding Department of Defense (DoD) Policy on Emergency Blood Transfusions in Combat Theaters and Impact on Human Immunodeficiency Virus (HIV) Testing Policy.” Health.mil. 2 June. Accessed 10 April 2017. <https://health.mil/Military-Health-Topics/Health-Readiness/Public-Health/Deployment-Health?type=All&page=5#pagingAnchor>.
- Department of the Navy (DN). 2010. “Navy and Marine Corps HIV Policy Course.” Navy and Marine Corps Public Health Center. Technical Manual (TM 6100.99-9F. March. Accessed 3 November 2016. [http://www.public.navy.mil/surfor/Documents/6100\\_99\\_9F\\_NMCPHC\\_TM\\_HP.pdf](http://www.public.navy.mil/surfor/Documents/6100_99_9F_NMCPHC_TM_HP.pdf).
- . 2012. SECNAV Instruction 5300.30E, *Management of HIV, HEP B, HEP C in the Navy and Marine Corps*. Med.Navy.mil. 13 August. Accessed 3 November 2016. <http://www.med.navy.mil/sites/nmcphc/Documents/nepmu-6/Epidemiology/SECNAVINST-5300.30E-HIV-and-Hepatitis.pdf>.
- . 2013. MILPERSMAN 1300-1300, *Assignment of Personnel with Blood-Borne Pathogens*. 6 August. Accessed 6 April 2017. <http://www.med.navy.mil/sites/nmcphc/Documents/nbimc/MILPERSMAN-1300-1300.pdf>.
- Department of State. 2015. “Report on Status of Forces Agreement.” International Security Advisory Board. 16 January. Accessed 8 April 2017. <https://www.state.gov/documents/organization/236456.pdf>.
- Francis, Catrina. 2016. “HIV Infections on the Rise, Military Can Be at Risk.” Army.mil. 19 February. Accessed 2 November. 2016. [https://www.army.mil/article/162666/HIV\\_infections\\_on\\_the\\_rise\\_\\_military\\_can\\_be\\_at\\_risk](https://www.army.mil/article/162666/HIV_infections_on_the_rise__military_can_be_at_risk).
- Garson, G. David. 2013. *Validity and Reliability*. Asheboro, NC: Statistical Associates. Kindle Edition.
- HIV Clinical Resource. 2009. “Management of IRIS Guideline.” Hivguidelines.org. August. Accessed 17 November 2016. [http://www.hivguidelines.org/adult-hiv/iris/#tab\\_0](http://www.hivguidelines.org/adult-hiv/iris/#tab_0).
- Infectious Disease Clinical Research Program (IDCRP). 2017. “Human Immunodeficiency Virus.” Uniformed Service University of the Health Sciences.

- Accessed 17 November. 2017. <http://www.idcrp.org/research-area/human-immunodeficiency-virus>.
- Kem, Jackie, Dr. 2012. "Planning for Action: Campaign Concepts and Tools." United States Army Command and General Staff College, Fort Leavenworth, KS. Updated June 2013.
- . 2017. CGSC Supervisory Professor and MMAS Chair. Retired COL, United States Army. Discussion on the PEB process and who is the authority to make change.
- Kose Sukran, Mandiraciojlu Aliye, Mermut Gulsen, Kaptan Figen, and Ozbel Yusuf. 2012. "The Social and Health Problems of People Living with HIV/AIDS in Izmir, Turkey." *Eurasian Journal of Medicine*. 7 April. Accessed 8 April 2017. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4261415/>.
- Maucione, Scott. 2016. "Are Some of the Army's Best Soldiers Being Forced Out." Federal News Radio, 31 October. Accessed 8 April 2017. <http://federalnewsradio.com/army/2016/10/army-best-soldiers-forced-out/>.
- MEDCOM. 2017. United States Army. "Structured Interview with a MEDCOM HIV Subject Matter Expert." Interview response received 12 April. The name of the interviewee is withheld by mutual agreement. Email response to structured questions can be found in Appendix D.
- Medline Plus. 2015. "Neurologic Deficit" Medical Encyclopedia. 2 March. Accessed 8 April 2017. <https://medlineplus.gov/ency/article/002267.htm>.
- Merriam-Webster Dictionary. 2017a. "Antiretroviral Therapy." Accessed 8 April. <https://www.merriam-webster.com/medical/antiretroviral%20therapy>.
- . 2017b. "Highly Active Antiretroviral Therapy." Accessed 8 April. <https://www.merriam-webster.com/medical/highly%20active%20antiretroviral%20therapy>.
- . 2017c. "HIV." Accessed 8 April. <https://www.merriamwebster.com/dictionary/HIV>.
- . 2017d. "HIV-1." Accessed 8 April. <https://www.merriamwebster.com/dictionary/hiv-1>.
- . 2017e. "HIV-2." Accessed 8 April. <https://www.merriamwebster.com/dictionary/hiv-2>.
- . 2017f. "Renal Disease." Accessed 8 April. <https://www.merriam-webster.com/medical/renal%20disease>.



- . 2017g. “Serology.” Accessed 8 April. <https://www.merriam-webster.com/dictionary/serologic>.
- . 2017h. “Tuberculosis.” Accessed 8 April. <https://www.merriam-webster.com/dictionary/tuberculosis>.
- Munson Army Medical Center. 2017. “Blood-borne Pathogen Protocol.” *Infection Prevention Manual*. Emailed to author, 16 February.
- The AIDS Institute (TAI). 2017. “Where Did HIV Come From?” Accessed 22 April 2017. <http://www.theaidsinstitute.org/node/259>.
- U.S. Army. 2017a. “Army Values.” Accessed 8 April 2017. <https://www.army.mil/values/>.
- . 2017b. “Intergraded Disability Evaluation System.” United States Army Warrior Care and Transition.mil. Accessed 8 April 2017. <http://www.wct.army.mil/modules/soldier/s6-ides.html>.
- U.S. Military HIV Research Program (MHRP). 2015. “New Findings Provide Insight into HIV Epidemic in the U.S. Army.” HIV Research.org. 4 September. Accessed 28 February 2017. <http://www.hivresearch.org/news/new-findings-provide-insight-hiv-epidemic-us-army>.
- U.S. President Emergency Plan and AIDS Relief. 2017. “Department of Defense.” Accessed 20 April. <http://www.pepfar.gov/about/agencies/c19397.htm>.
- Vandiver, John. 2015. “Syphilis Rates Spike Among Service Members.” *Stars and Stripes*, 23 October. Accessed 28 February 2017. <http://www.stripes.com/news/us/syphilis-rates-spike-among-servicemembers-1.374537#.WLYBkjtqPP8>.
- World Health Organization (WHO). 2016. “HIV/AIDS Online Q&A.” November. Accessed 17 November 2016. <http://www.who.int/features/qa/71/en/>.